FIG. 1

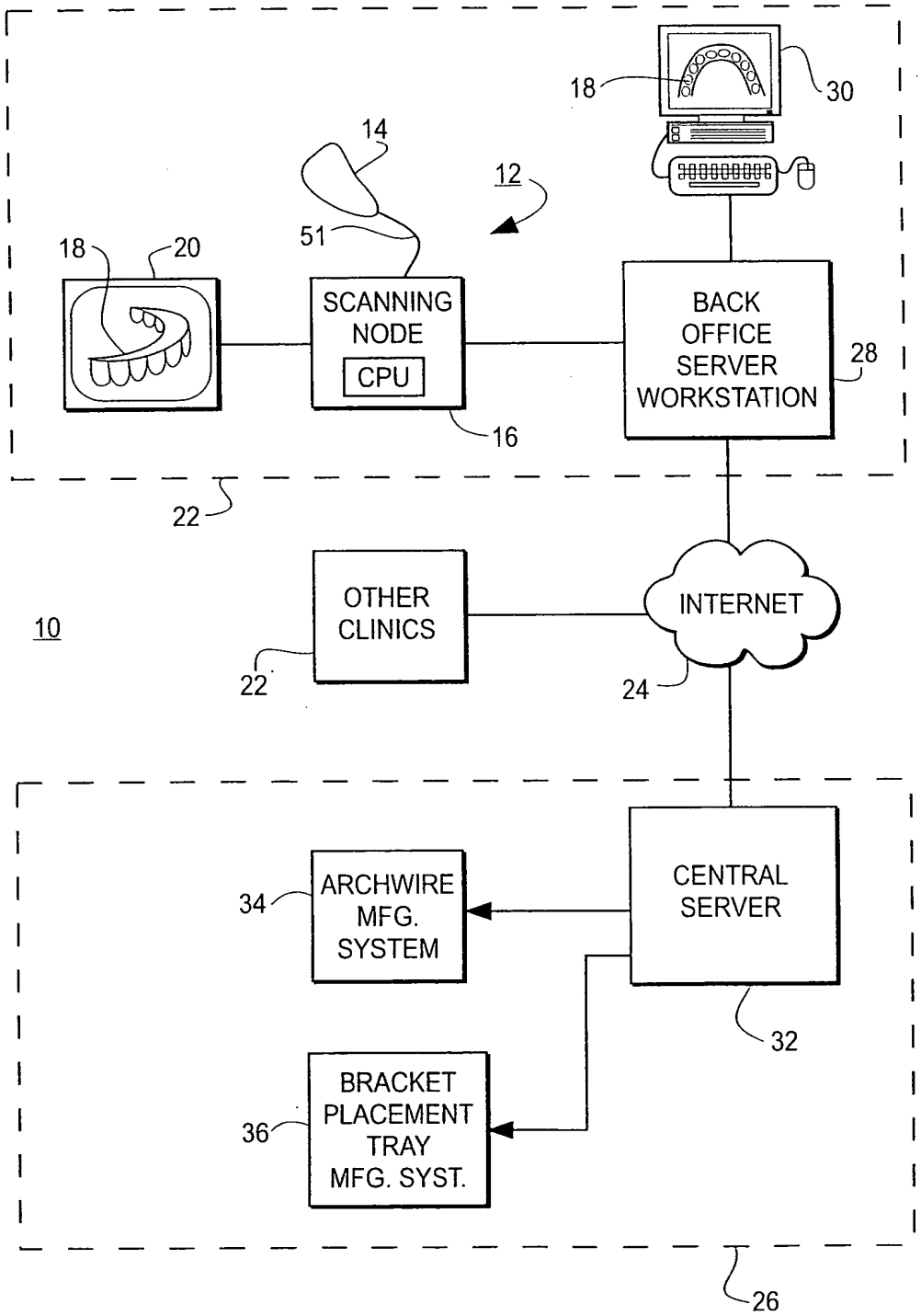

18
30
14
12
51
18
20
SCANNING NODE
CPU
BACK OFFICE SERVER WORKSTATION
28
16
22
10
OTHER CLINICS
INTERNET
22
24
CENTRAL SERVER
34
ARCHWIRE MFG. SYSTEM
32
BRACKET PLACEMENT TRAY MFG. SYST.
36
26

FIG. 2

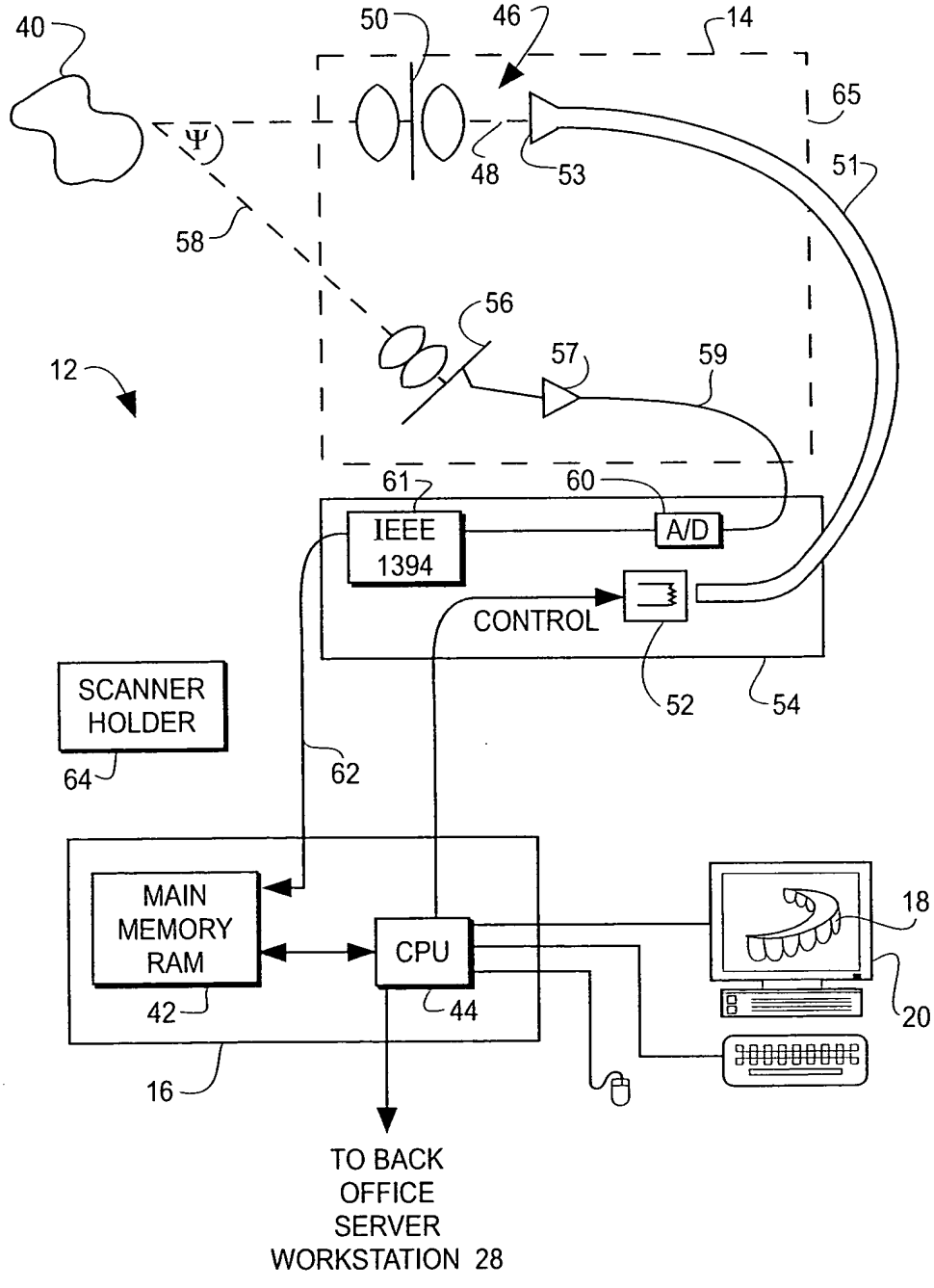

40
50
46
14
65
48
53
51
58
56
57
59
12
61
60
IEEE 1394
A/D
CONTROL
52
54
SCANNER HOLDER
64
62
MAIN MEMORY RAM
42
CPU
44
18
20
16
TO BACK OFFICE SERVER WORKSTATION 28

FIG. 3

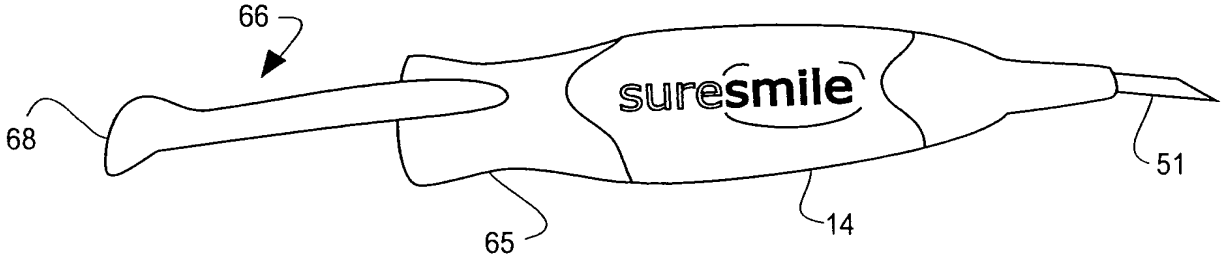


FIG. 4

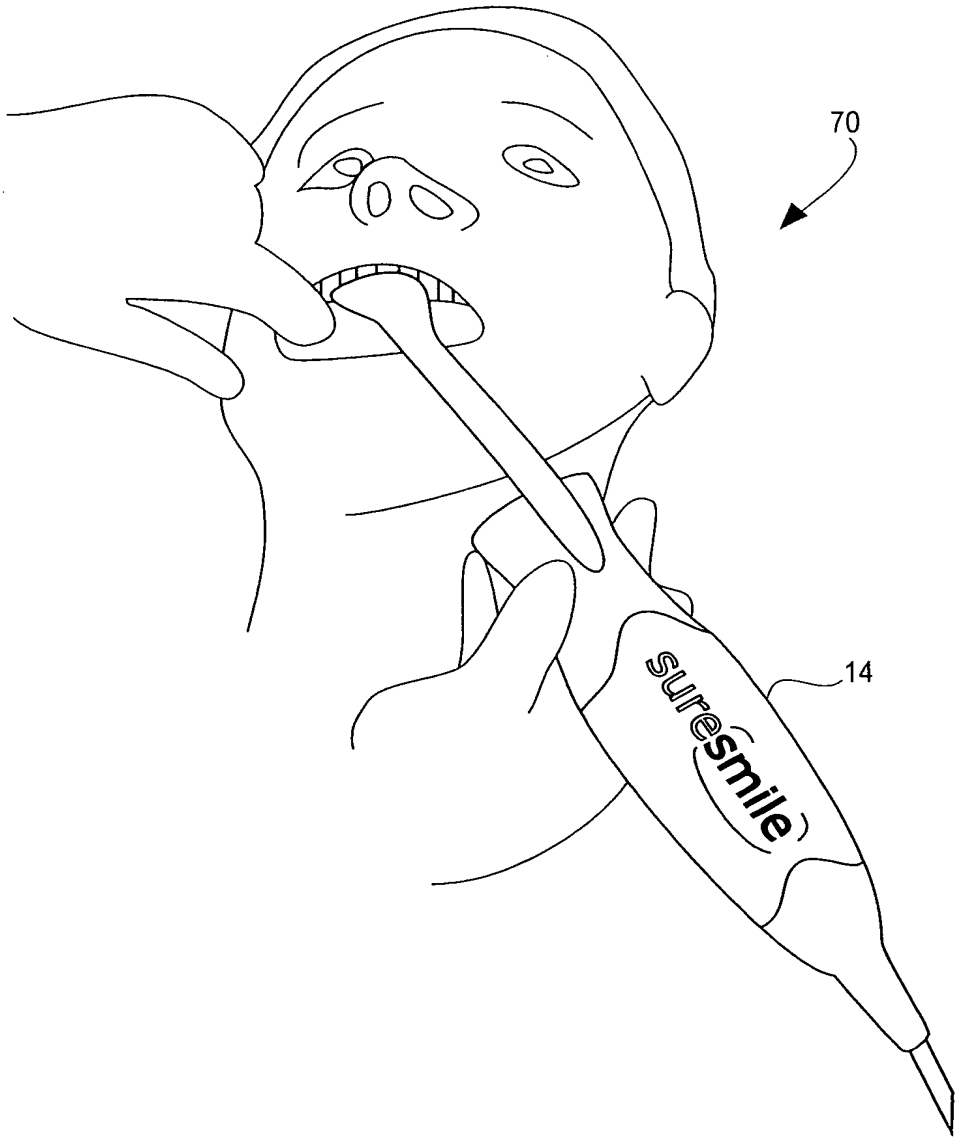
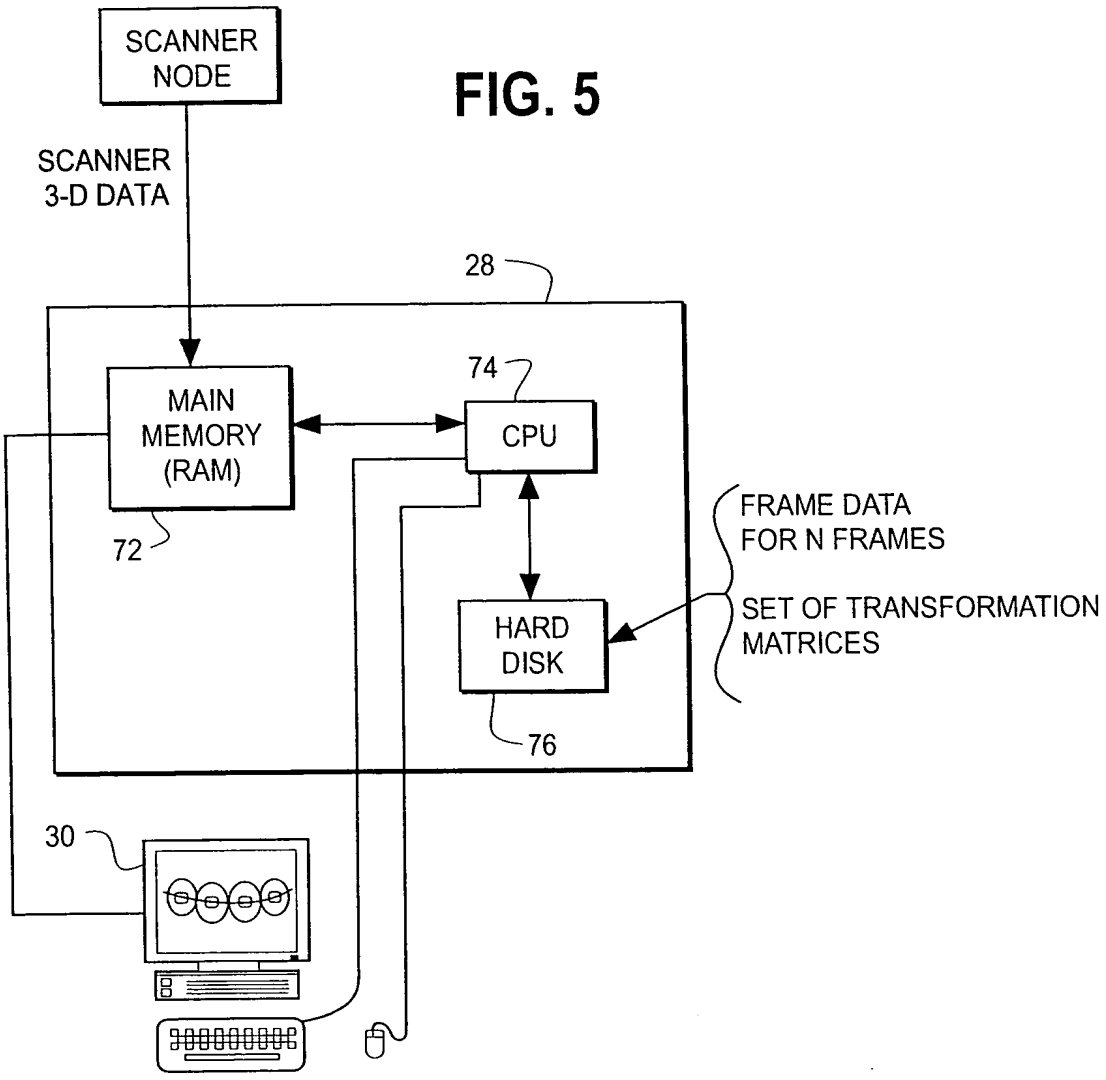


FIG. 5


SCANNER NODE
SCANNER 3-D DATA
28
74
MAIN MEMORY (RAM)
CPU
72
FRAME DATA FOR N FRAMES
SET OF TRANSFORMATION MATRICES
HARD DISK
76
30

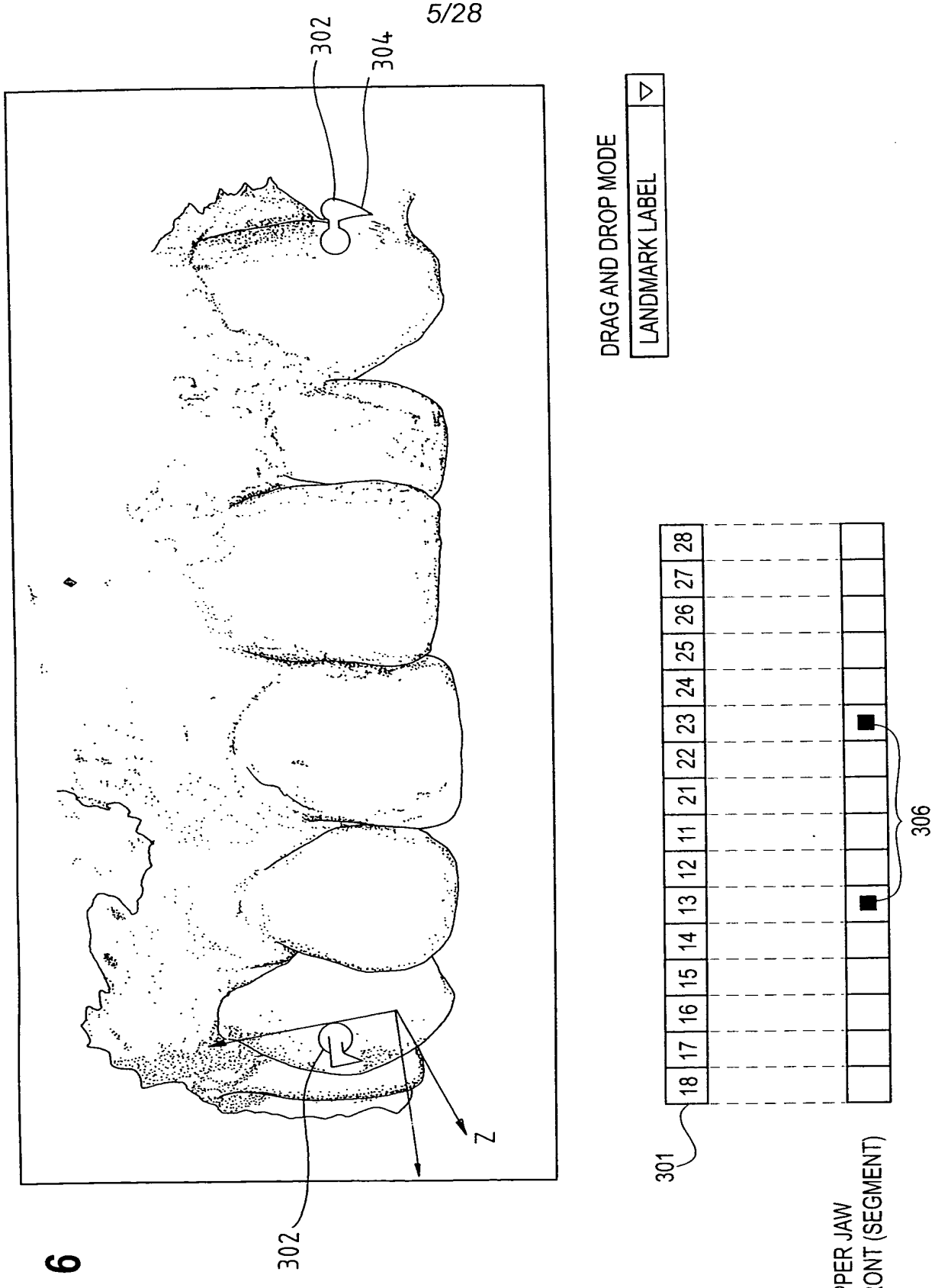

302
304
DRAG AND DROP MODE
LANDMARK LABEL
18 17 16 15 14 13 12 11 21 22 23 24 25 26 27 28
306
301
UPPER JAW
FRONT (SEGMENT)
302
Z

FIG. 6

FIG. 7A

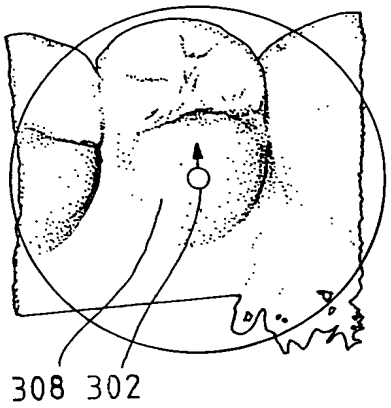


FIG. 7B

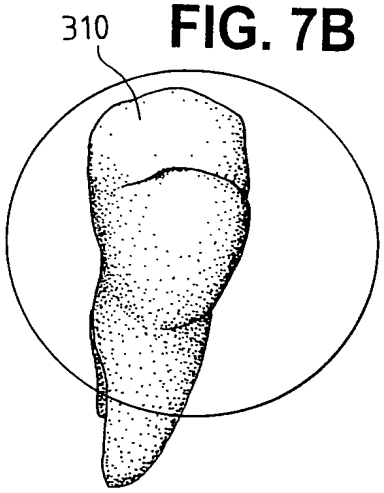


FIG. 7C

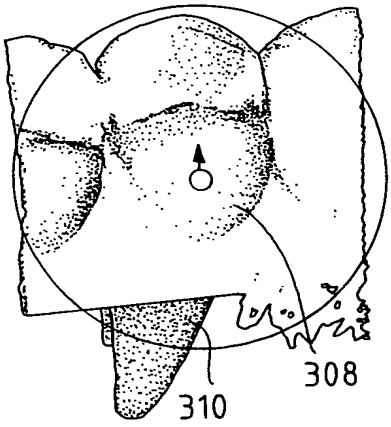


FIG. 7D

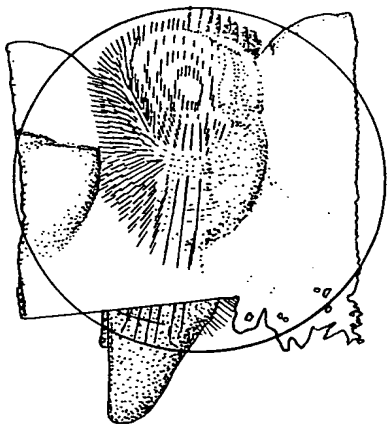


FIG. 7E

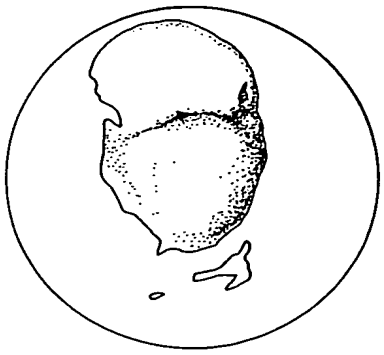


FIG. 7F

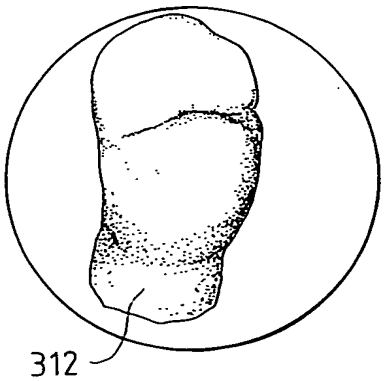


FIG. 8

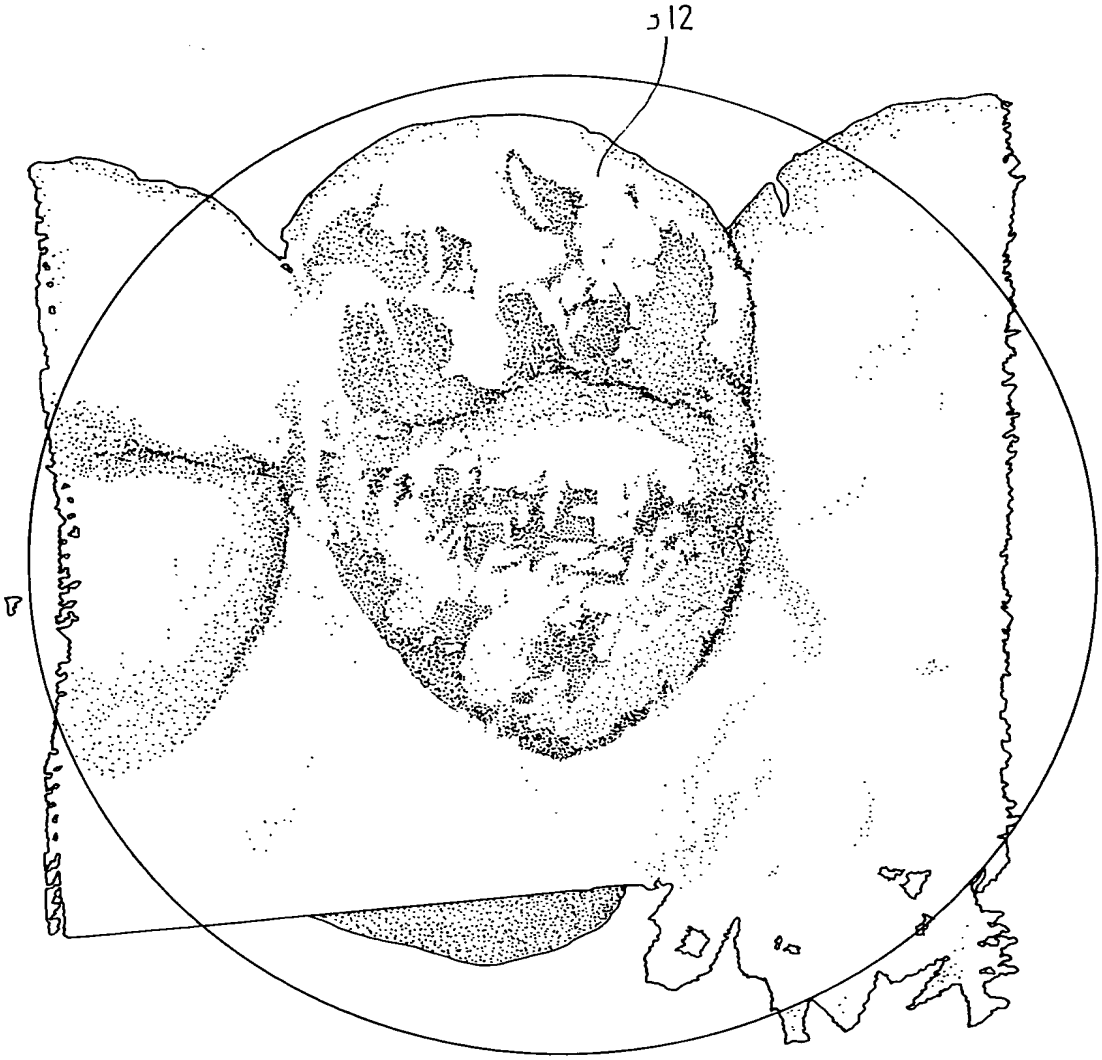


FIG. 9

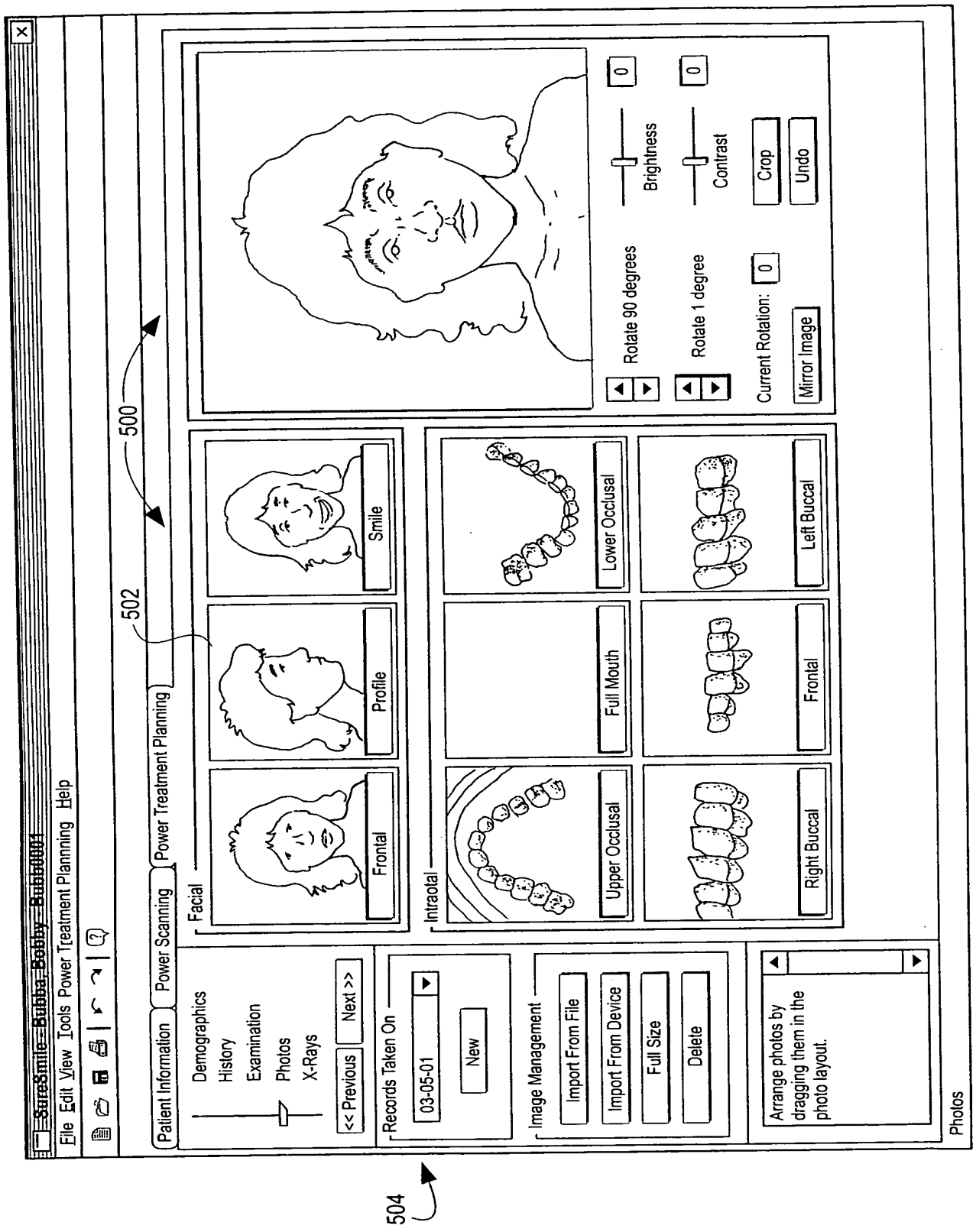

SureSmile - Bubba, Bobby - Bub0001
File Edit View Tools Power Treatment Planning Help
Patient Information
Power Scanning
Power Treatment Planning
500
502
504
Demographics
History
Examination
Photos
X-Rays
<< Previous
Next >>
Facial
Frontal
Profile
Smile
Intraotal
Upper Occlusal
Full Mouth
Lower Occlusal
Right Buccal
Frontal
Left Buccal
Rotate 90 degrees
Brightness
Rotate 1 degree
Contrast
Current Rotation:
Crop
Undo
Mirror Image
Records Taken On
03-05-01
New
Image Management
Import From File
Import From Device
Full Size
Delete
Arrange photos by dragging them in the photo layout.
Photos

FIG. 10

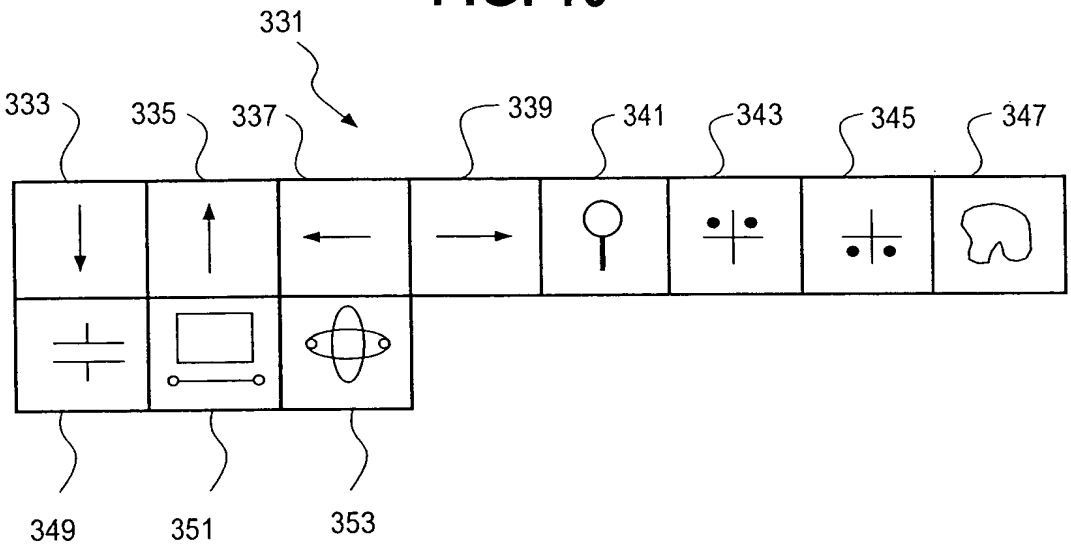
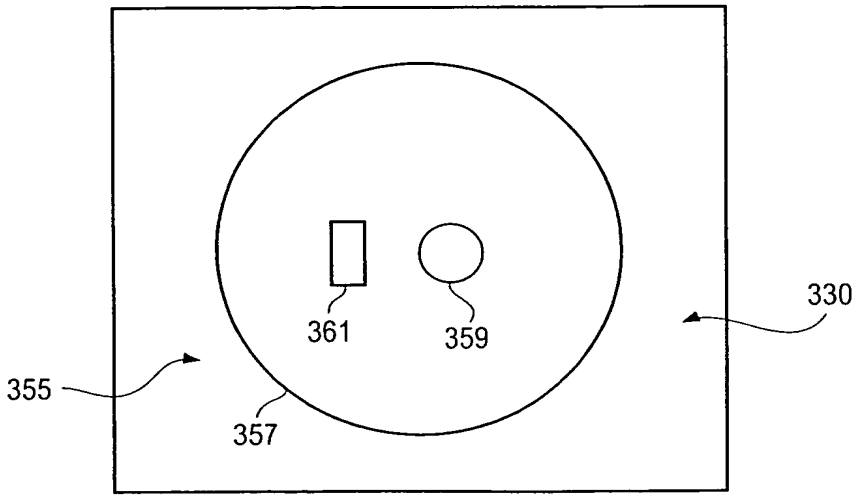

331
333
335
337
339
341
343
345
347
349
351
353

FIG. 11


330
361
359
355
357

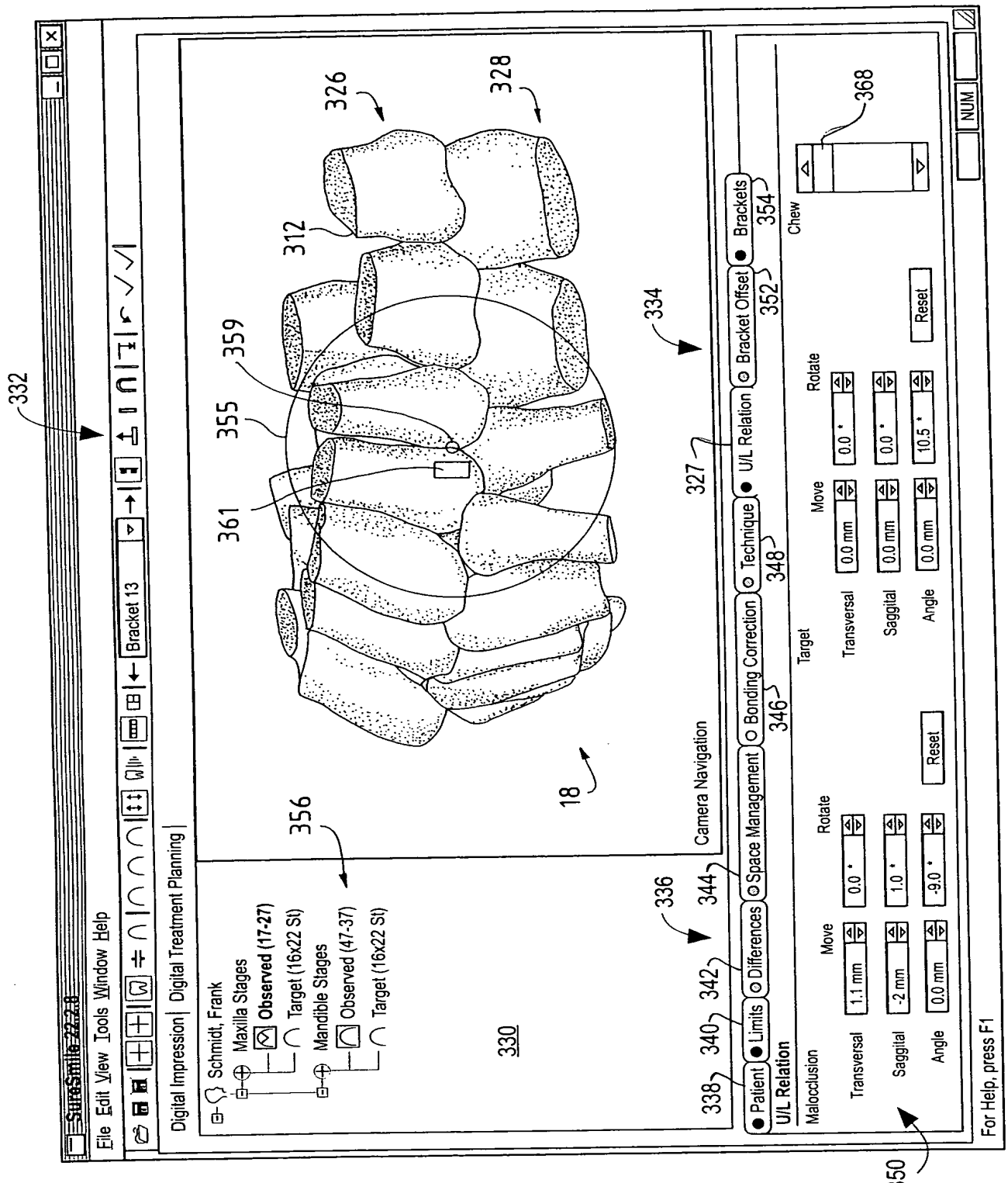

SureSmile 22.2.8
File Edit View Tools Window Help
Bracket 13
Digital Impression | Digital Treatment Planning |
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target (16x22 SI)
Mandible Stages
Observed (47-37)
Target (16x22 SI)
Camera Navigation
Patient
Limits
Differences
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Brackets
U/L Relation
Malocclusion
Move
Rotate
Transversal
Saggital
Angle
1.1 mm
-2 mm
0.0 mm
0.0 °
1.0 °
-9.0 °
Reset
Target
0.0 mm
0.0 mm
0.0 mm
0.0 °
0.0 °
10.5 °
Chew
For Help, press F1
NUM
332
330
356
336
338
340
342
344
346
348
350
352
354
18
312
326
327
328
334
355
359
361
368

FIG. 12

FIG. 13

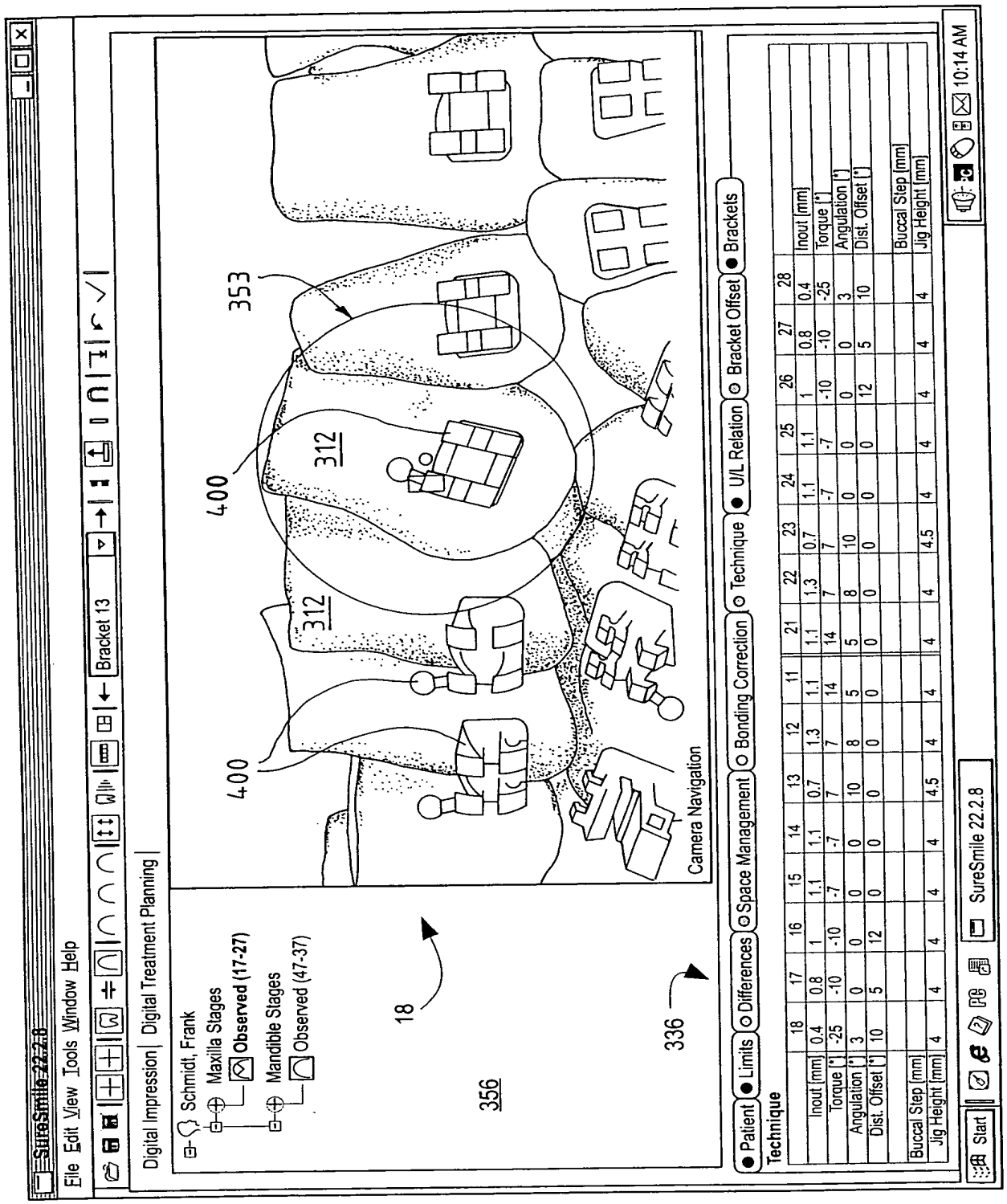

SureSmile 22.2.8
File Edit View Tools Window Help
Bracket 13
Digital Impression | Digital Treatment Planning
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Mandible Stages
Observed (47-37)
356
18
330
400
400
312
312
353
Camera Navigation
336
Patient
Limits
Differences
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Brackets
Technique
Inout [mm]
Torque [°]
Angulation [°]
Dist. Offset [°]
Buccal Step [mm]
Jig Height [mm]
Start
SureSmile 22.2.8
10:14 AM

FIG. 14

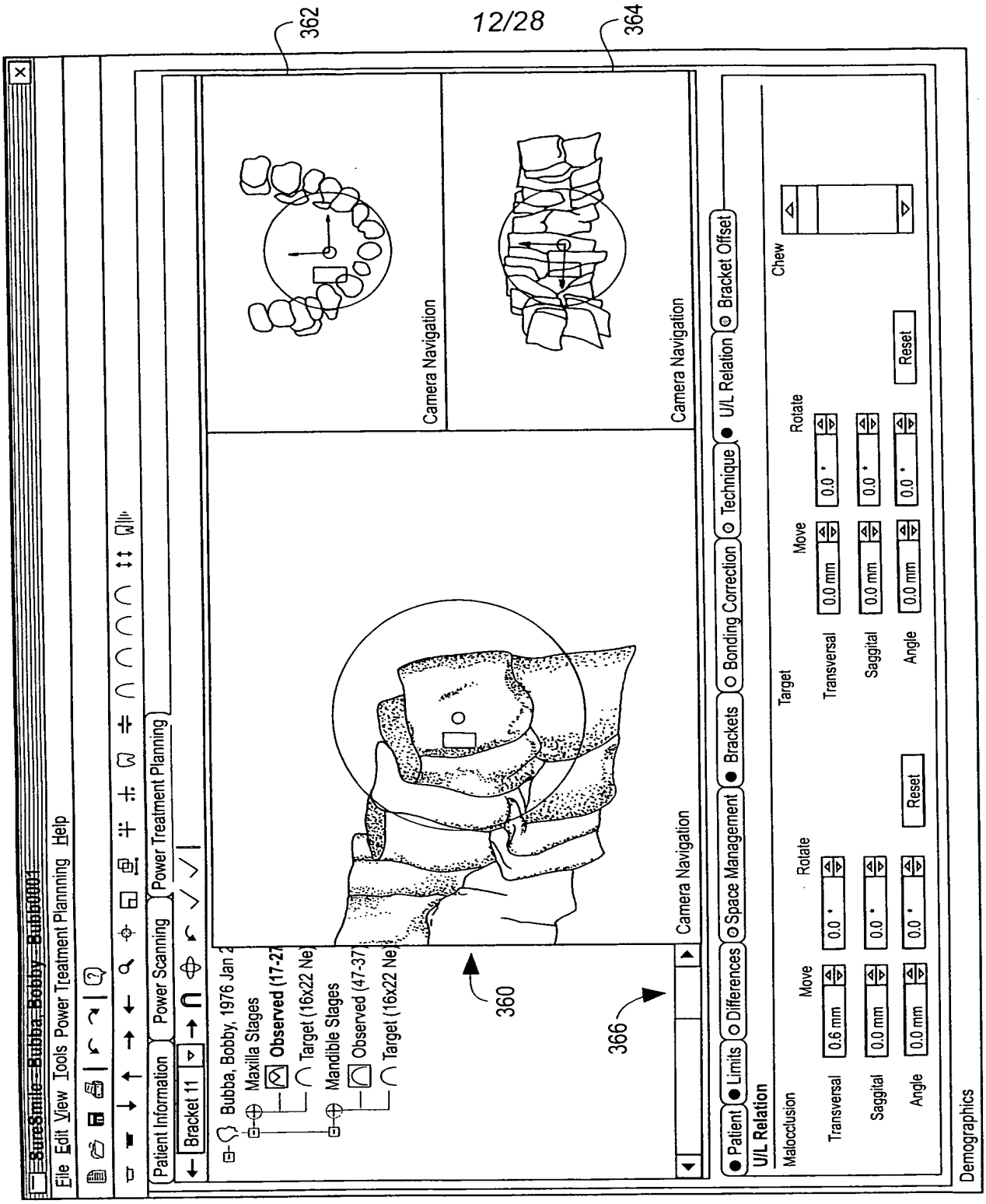
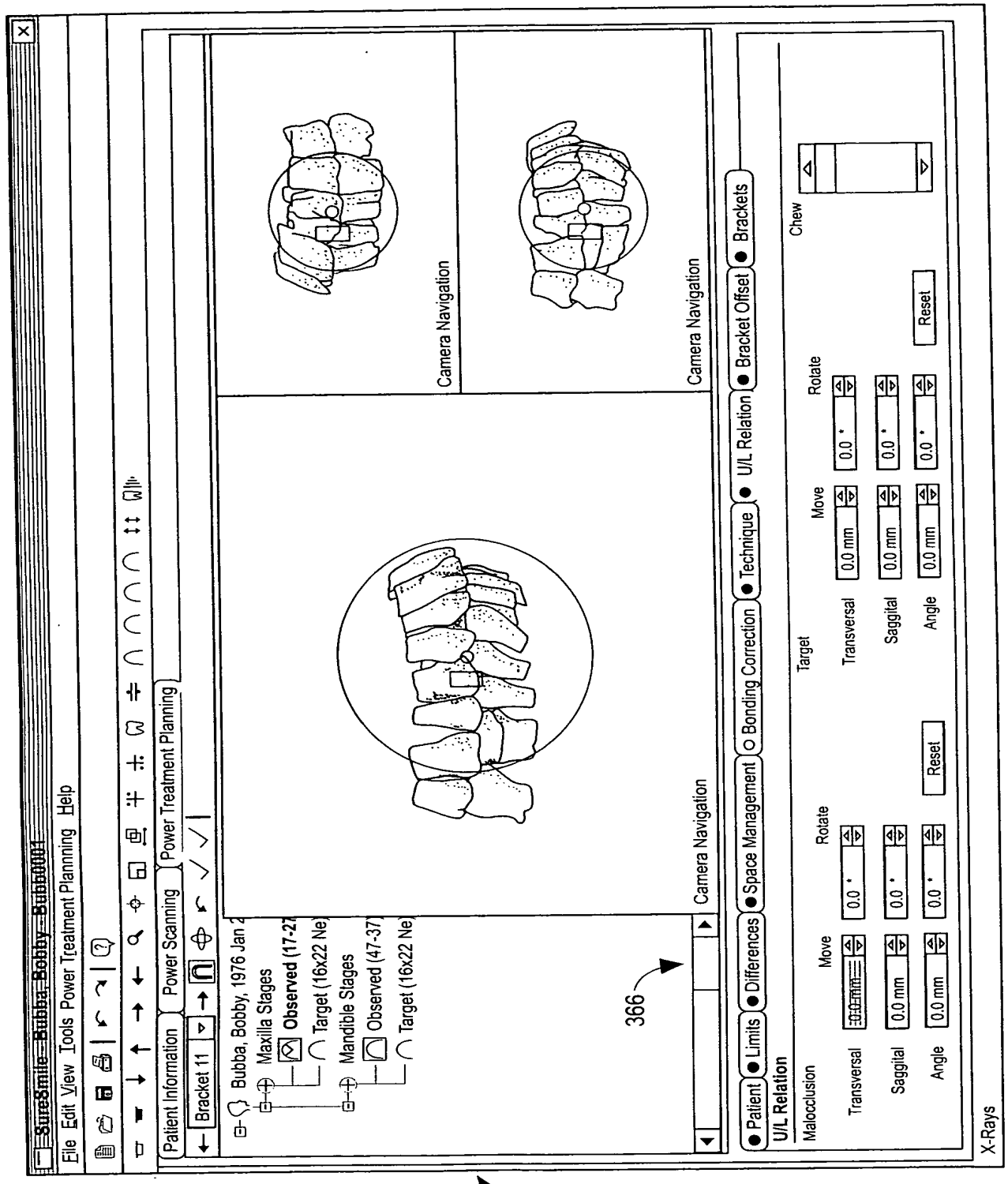

362
364
SureSmile - Bubba, Bobby - Bubb0001
File Edit View Tools Power Treatment Planning Help
Patient Information
Power Scanning
Power Treatment Planning
Bracket 11
Bubba, Bobby, 1976 Jan 2
Maxilla Stages
Observed (17-27
Target (16x22 Ne
Mandible Stages
Observed (47-37)
Target (16x22 Ne
360
366
Camera Navigation
Camera Navigation
Camera Navigation
Patient
Limits
Differences
Space Management
Brackets
Bonding Correction
Technique
U/L Relation
Bracket Offset
U/L Relation
Malocclusion
Move
Rotate
Target
Transversal
0.6 mm
0.0 °
Sagittal
0.0 mm
0.0 °
Angle
0.0 mm
0.0 °
Reset
Transversal
0.0 mm
0.0 °
Sagittal
0.0 mm
0.0 °
Angle
0.0 mm
0.0 °
Reset
Chew
Demographics

FIG. 15


SureSmile - Bubba, Bobby - Bubb0001
File Edit View Tools Power Treatment Planning Help
Patient Information
Power Scanning
Power Treatment Planning
Bracket 11
Bubba, Bobby, 1976 Jan 2
Maxilla Stages
Observed (17-27
Target (16x22 Ne
Mandible Stages
Observed (47-37
Target (16x22 Ne
Camera Navigation
Camera Navigation
Camera Navigation
366
330
Patient
Limits
Differences
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Brackets
U/L Relation
Malocclusion
Move
Rotate
Target
Move
Rotate
Chew
Transversal
Saggital
Angle
Reset
Transversal
Saggital
Angle
Reset
X-Rays

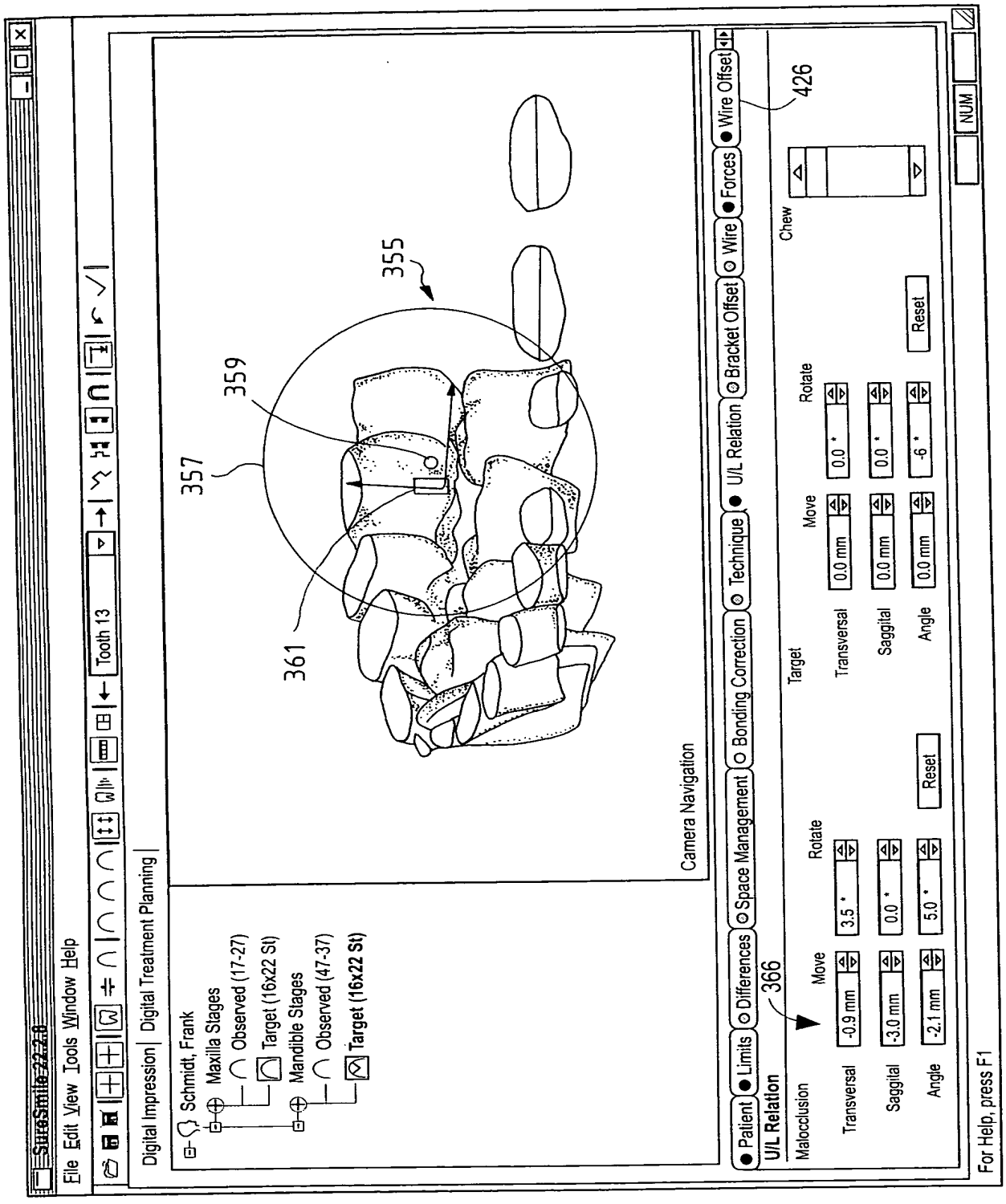

SureSmile
File Edit View Tools Window Help
Tooth 13
Digital Impression | Digital Treatment Planning
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target (16x22 St)
Mandible Stages
Observed (47-37)
Target (16x22 St)
357
359
361
355
Camera Navigation
Patient
Limits
Differences
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Wire
Forces
Wire Offset
426
U/L Relation
366
Malocclusion
Move
Rotate
Target
Move
Rotate
Transversal
-0.9 mm
3.5 °
Transversal
0.0 mm
0.0 °
Sagittal
-3.0 mm
0.0 °
Sagittal
0.0 mm
0.0 °
Angle
-2.1 mm
5.0 °
Angle
0.0 mm
-6 °
Reset
Reset
Chew
For Help, press F1
NUM

FIG. 16

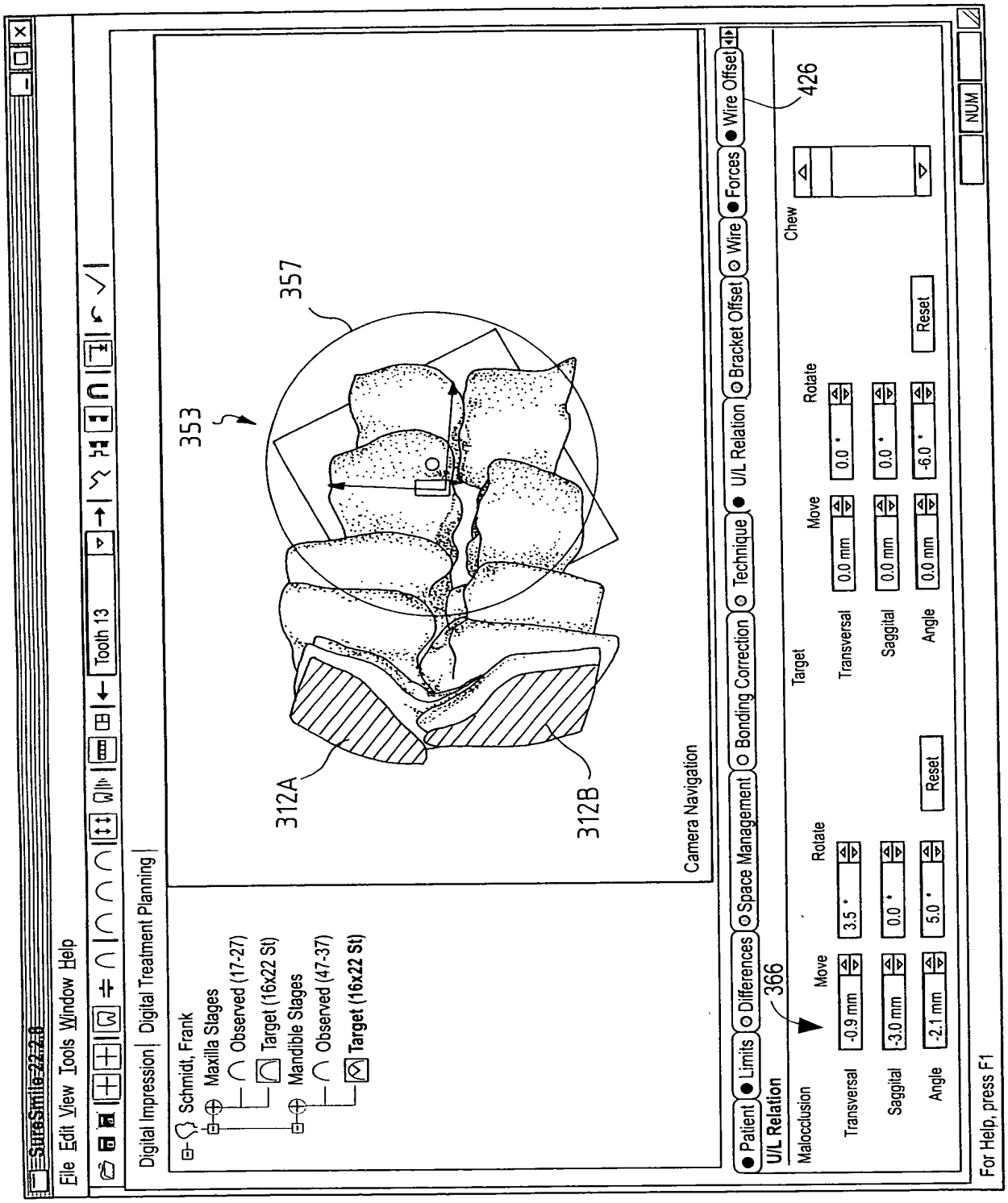
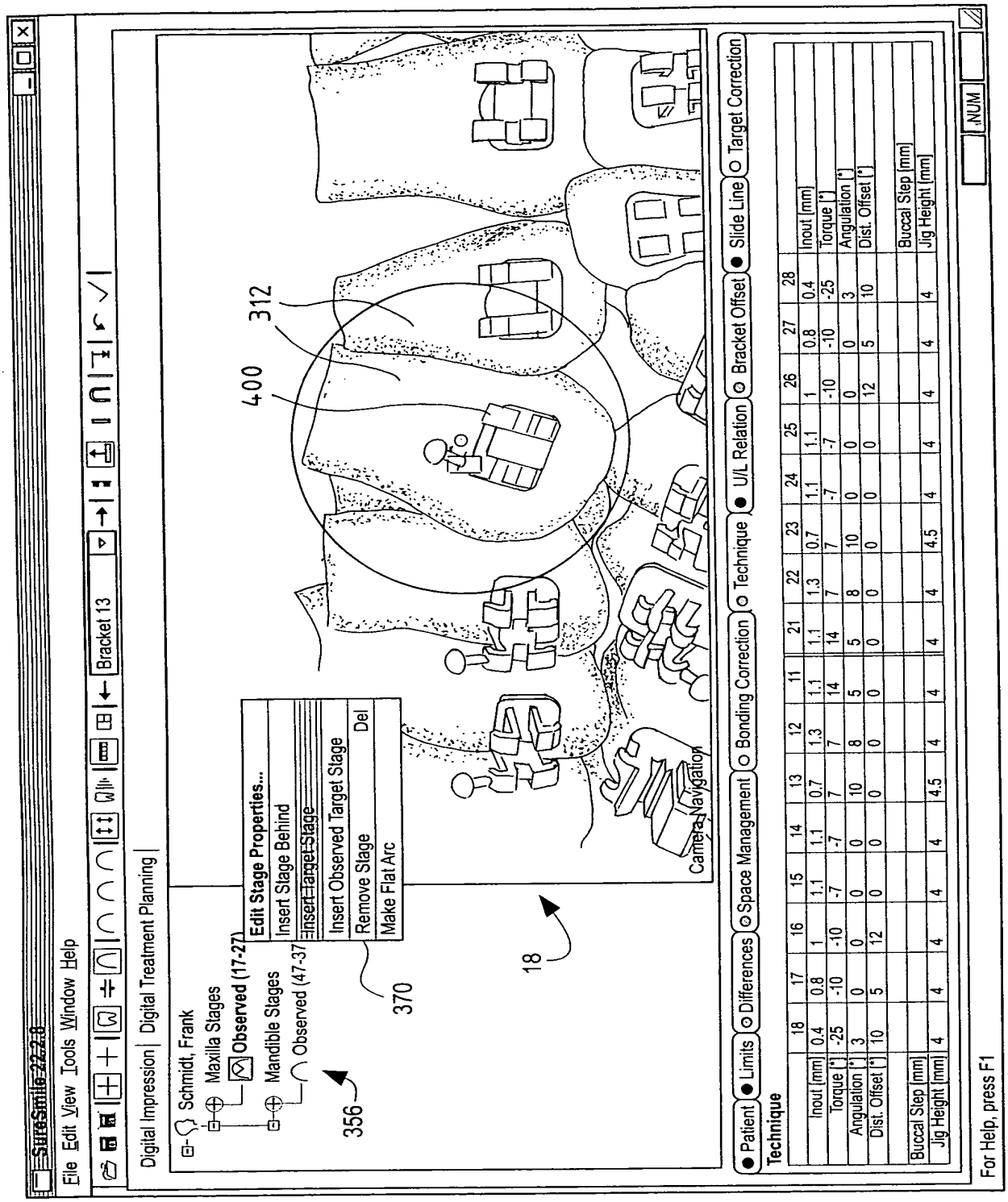

SureSmile 22.2.8
File Edit View Tools Window Help
Tooth 13
Digital Impression | Digital Treatment Planning |
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target (16x22 St)
Mandible Stages
Observed (47-37)
Target (16x22 St)
353
357
312A
312B
Camera Navigation
Patient
Limits
Differences
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Wire
Forces
Wire Offset
U/L Relation
366
Malocclusion
Move
Rotate
Target
Transversal
-0.9 mm
3.5 °
0.0 mm
0.0 °
Saggital
-3.0 mm
0.0 °
0.0 mm
0.0 °
Angle
-2.1 mm
5.0 °
0.0 mm
-6.0 °
Reset
Reset
Chew
426
For Help, press F1
NUM

FIG. 17



	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
Inout [mm]	0.4	0.8	1	1.1	1.1	0.7	1.3	1.1	1.1	1.3	0.7	1.1	1.1	1	0.8	0.4	Inout [mm]
Torque [°]	-25	-10	-10	-7	-7	7	7	14	14	7	7	-7	-7	-10	-10	-25	Torque [°]
Angulation [°]	3	0	0	0	0	10	8	5	5	8	10	0	0	0	0	3	Angulation [°]
Dist. Offset [°]	10	5	12	0	0	0	0	0	0	0	0	0	0	12	5	10	Dist. Offset [°]
Buccal Step [mm]																	Buccal Step [mm]
Jig Height [mm]	4	4	4	4	4	4.5	4	4	4	4	4.5	4	4	4	4	4	Jig Height [mm]

FIG. 18

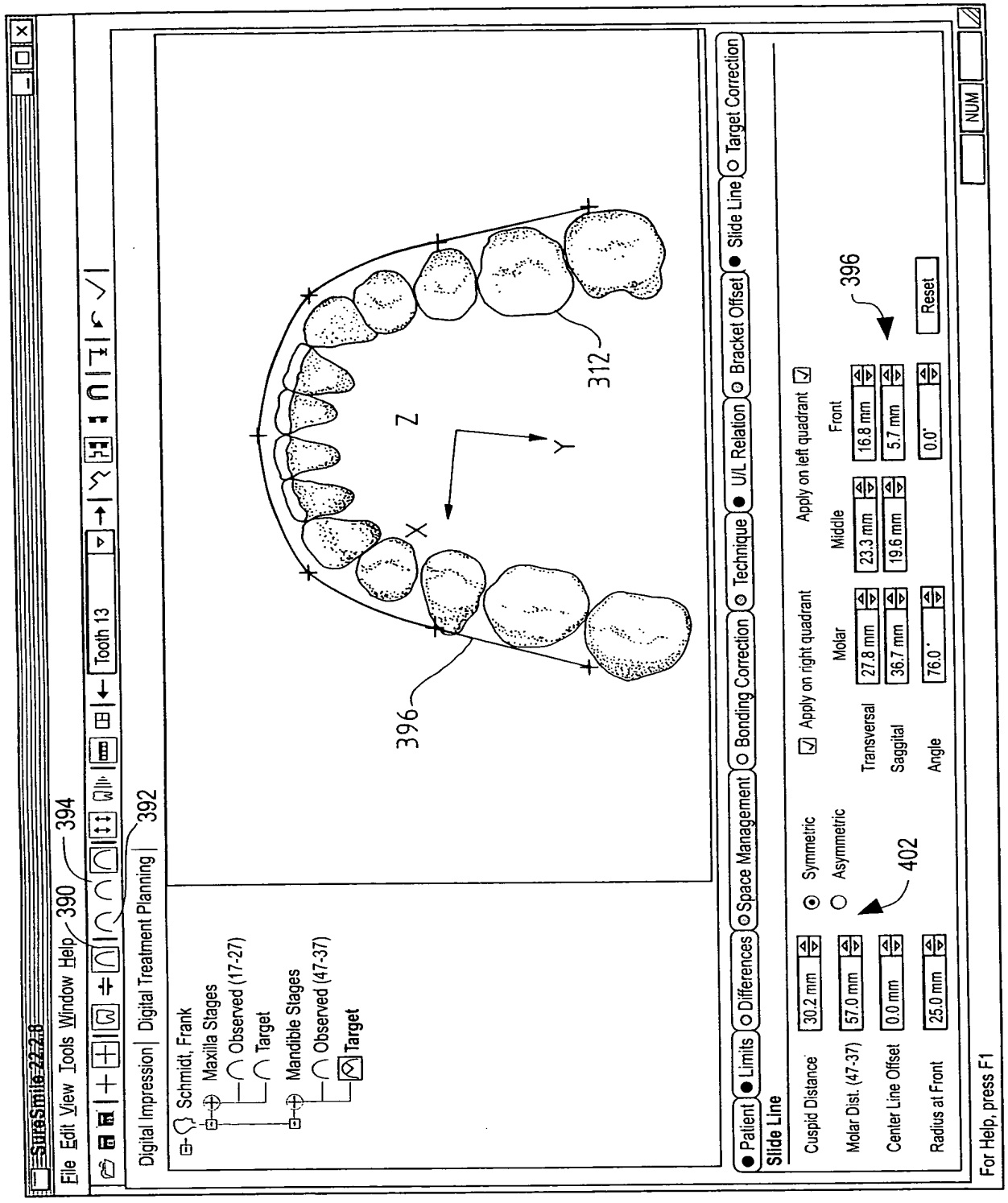
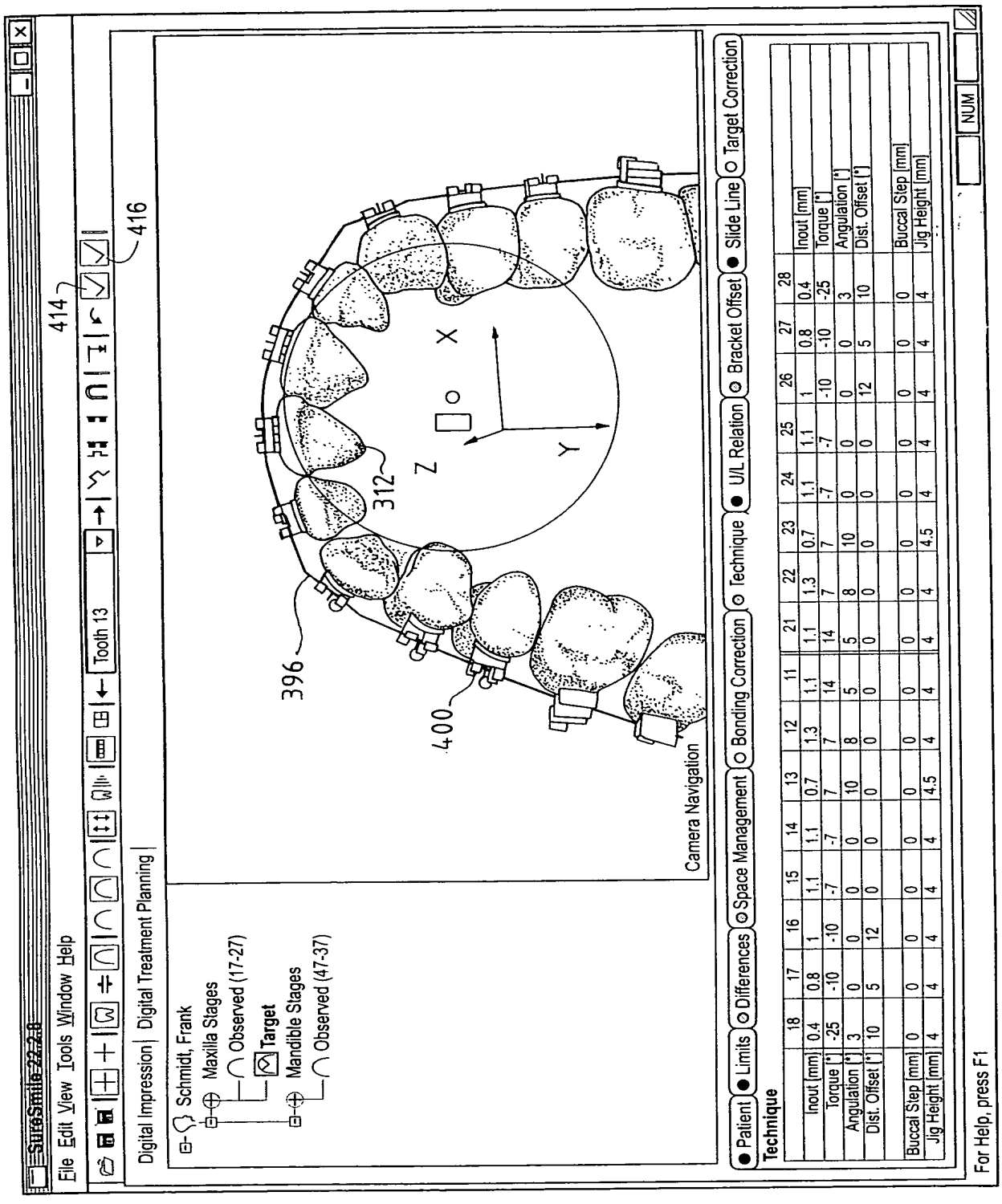

SureSmile
File Edit View Tools Window Help
390
394
392
Tooth 13
Digital Impression | Digital Treatment Planning
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target
Mandible Stages
Observed (47-37)
Target
396
312
Z
Y
X
Patient
Limits
Differences
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Slide Line
Target Correction
Slide Line
Cuspid Distance
30.2 mm
Symmetric
Asymmetric
Apply on right quadrant
Apply on left quadrant
Molar
Middle
Front
Molar Dist. (47-37)
57.0 mm
Transversal
27.8 mm
23.3 mm
16.8 mm
Center Line Offset
0.0 mm
Saggital
36.7 mm
19.6 mm
5.7 mm
Radius at Front
25.0 mm
Angle
76.0°
0.0°
Reset
402
396
For Help, press F1
NUM

FIG. 19



	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
Inout [mm]	0.4	0.8	1	1.1	1.1	0.7	1.3	1.1	1.1	1.3	0.7	1.1	1.1	1	0.8	0.4	Inout [mm]
Torque [°]	-25	-10	-10	-7	-7	7	7	14	14	7	7	-7	-7	-10	-10	-25	Torque [°]
Angulation [°]	3	0	0	0	0	10	8	5	5	8	10	0	0	0	0	3	Angulation [°]
Dist. Offset [°]	10	5	12	0	0	0	0	0	0	0	0	0	0	12	5	10	Dist. Offset [°]
Buccal Step [mm]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Buccal Step [mm]
Jig Height [mm]	4	4	4	4	4	4.5	4	4	4	4	4.5	4	4	4	4	4	Jig Height [mm]

FIG. 20

FIG. 21

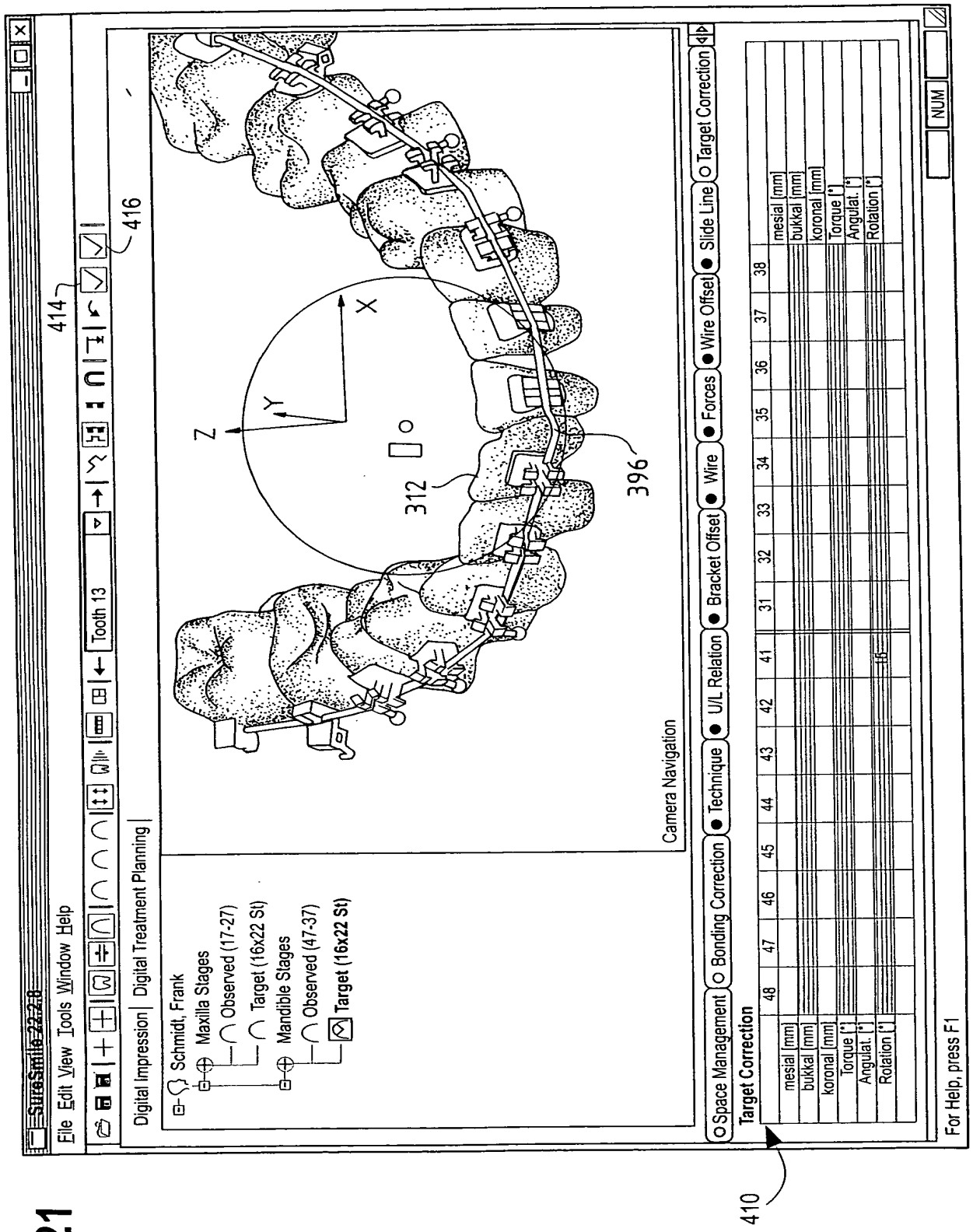
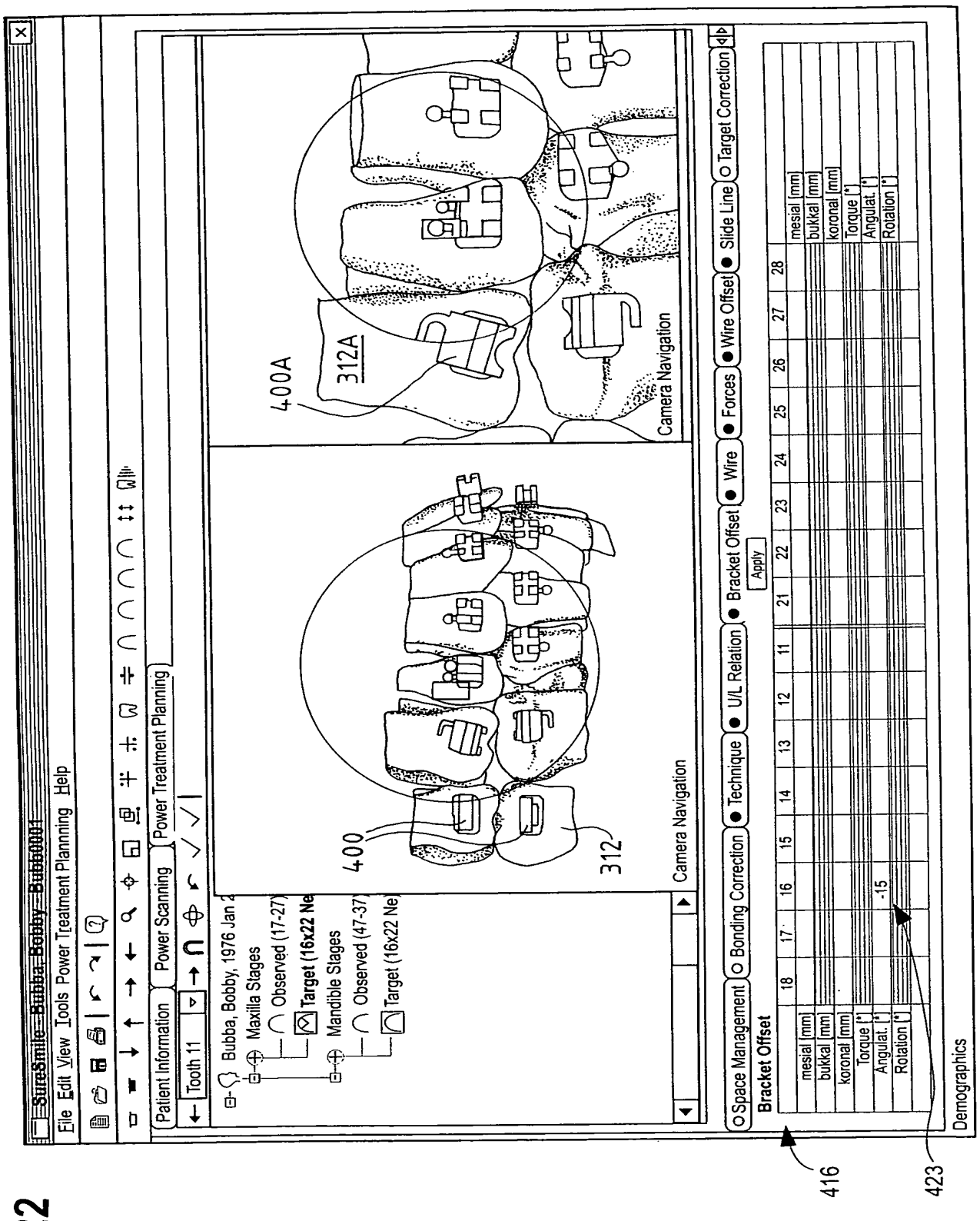

SureSmile 2.2.0
File Edit View Tools Window Help
Tooth 13
414
416
Digital Impression | Digital Treatment Planning |
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target (16x22 St)
Mandible Stages
Observed (47-37)
Target (16x22 St)
Z
Y
X
312
396
Camera Navigation
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Wire
Forces
Wire Offset
Slide Line
Target Correction
Target Correction
48 47 46 45 44 43 42 41 31 32 33 34 35 36 37 38
mesial [mm]
bukkal [mm]
koronal [mm]
Torque [°]
Angulat. [°]
Rotation [°]
410
NUM
For Help, press F1

FIG. 22


SureSmile: Bubba, Bobby - Bub00001
File Edit View Tools Power Treatment Planning Help
Patient Information
Power Scanning
Power Treatment Planning
Tooth 11
Bubba, Bobby, 1976 Jan
Maxilla Stages
Observed (17-27)
Target (16x22 Ne
Mandible Stages
Observed (47-37)
Target (16x22 Ne
400
312
Camera Navigation
400A
312A
Camera Navigation
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Wire
Forces
Wire Offset
Slide Line
Target Correction
Bracket Offset
Apply
mesial [mm]
bukkal [mm]
koronal [mm]
Torque [°]
Angulat. [°]
Rotation [°]
-15
Demographics
416
423

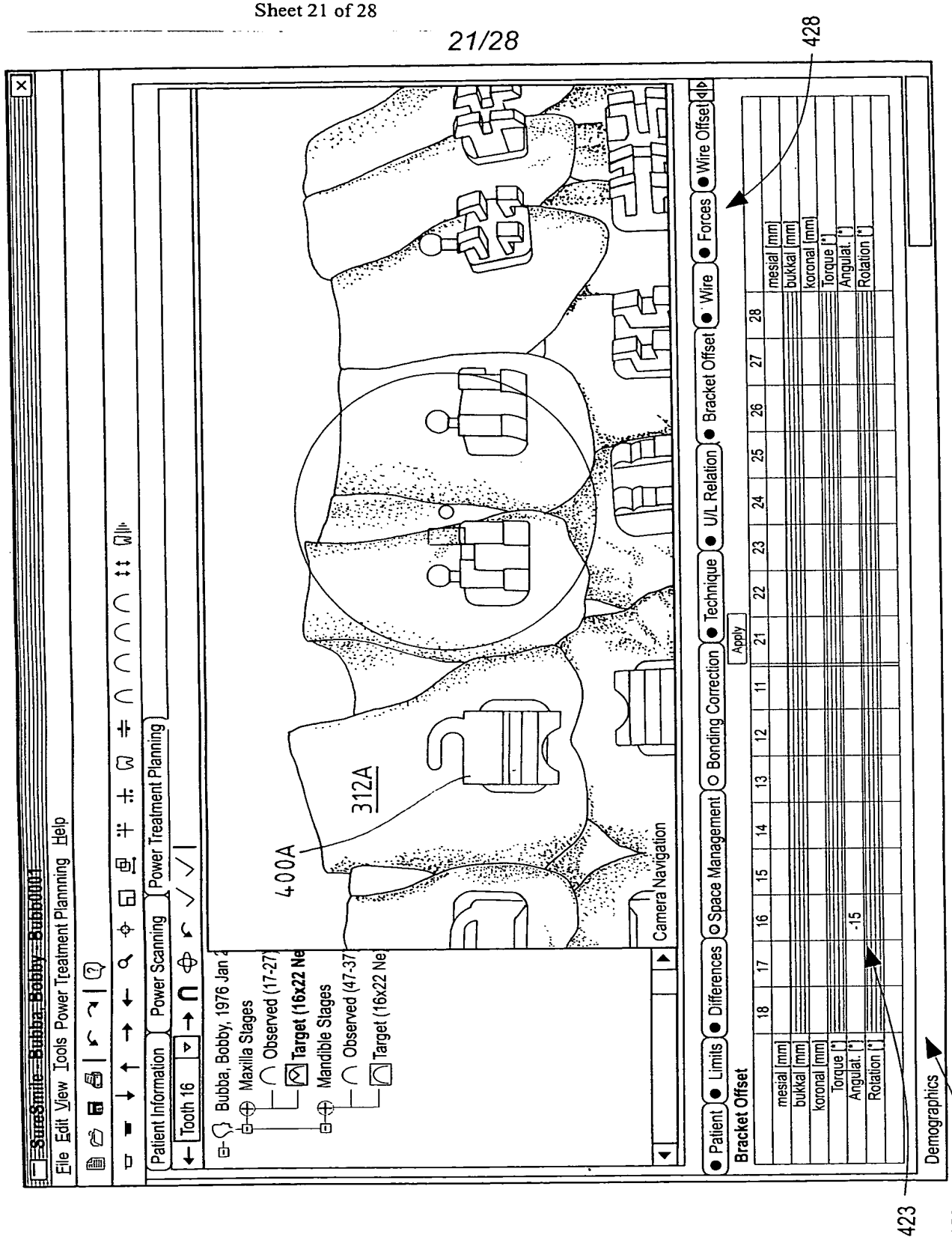


FIG. 23

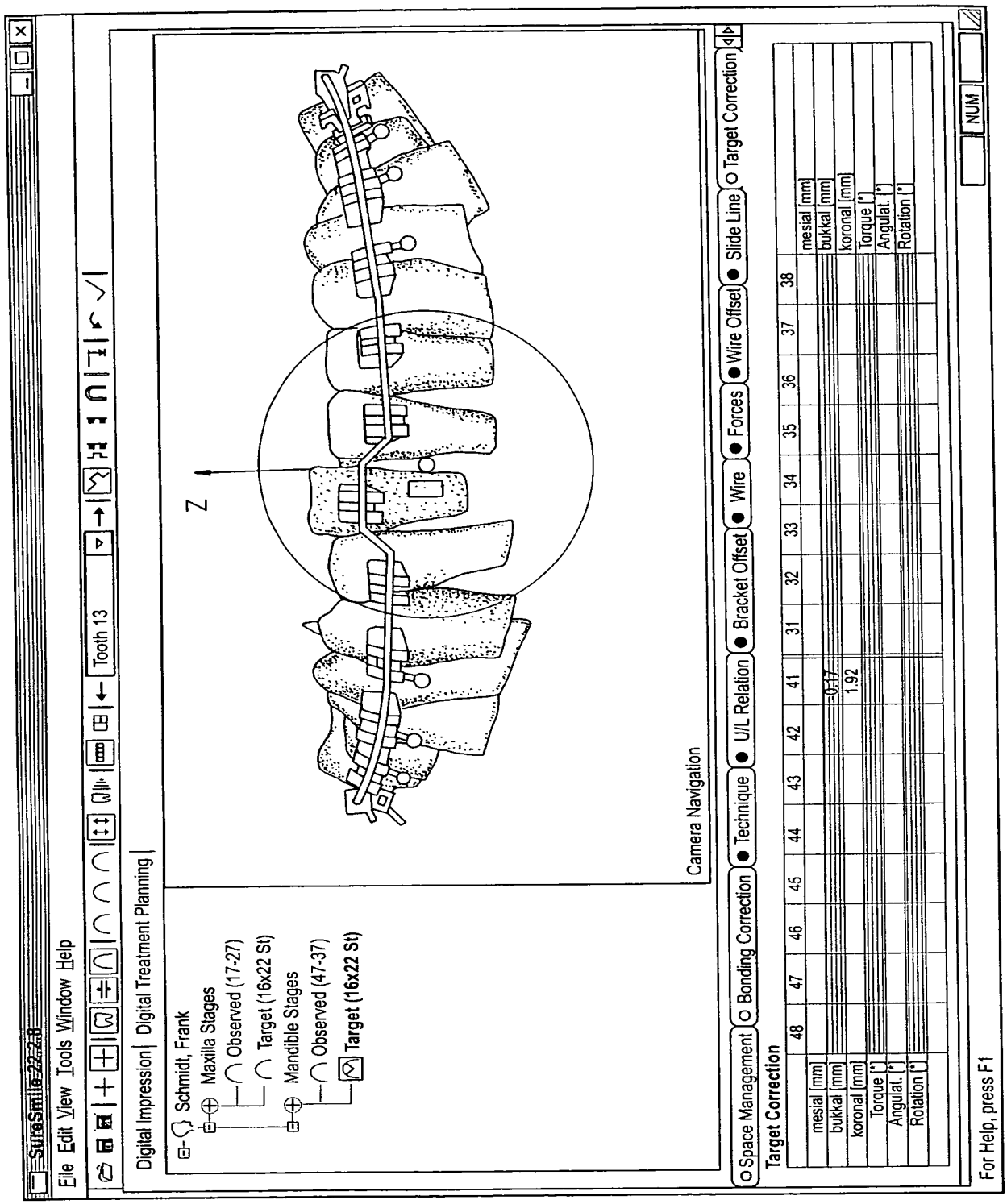

SureSmile 22.2.0
File Edit View Tools Window Help
Tooth 13
Digital Impression | Digital Treatment Planning |
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target (16x22 St)
Mandible Stages
Observed (47-37)
Target (16x22 St)
Z
Camera Navigation
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Wire
Forces
Wire Offset
Slide Line
Target Correction
Target Correction
48 47 46 45 44 43 42 41 31 32 33 34 35 36 37 38
mesial [mm]
bukkal [mm]
koronal [mm]
Torque [°]
Angulat. [°]
Rotation [°]
0.17
1.92
For Help, press F1
NUM

FIG. 24

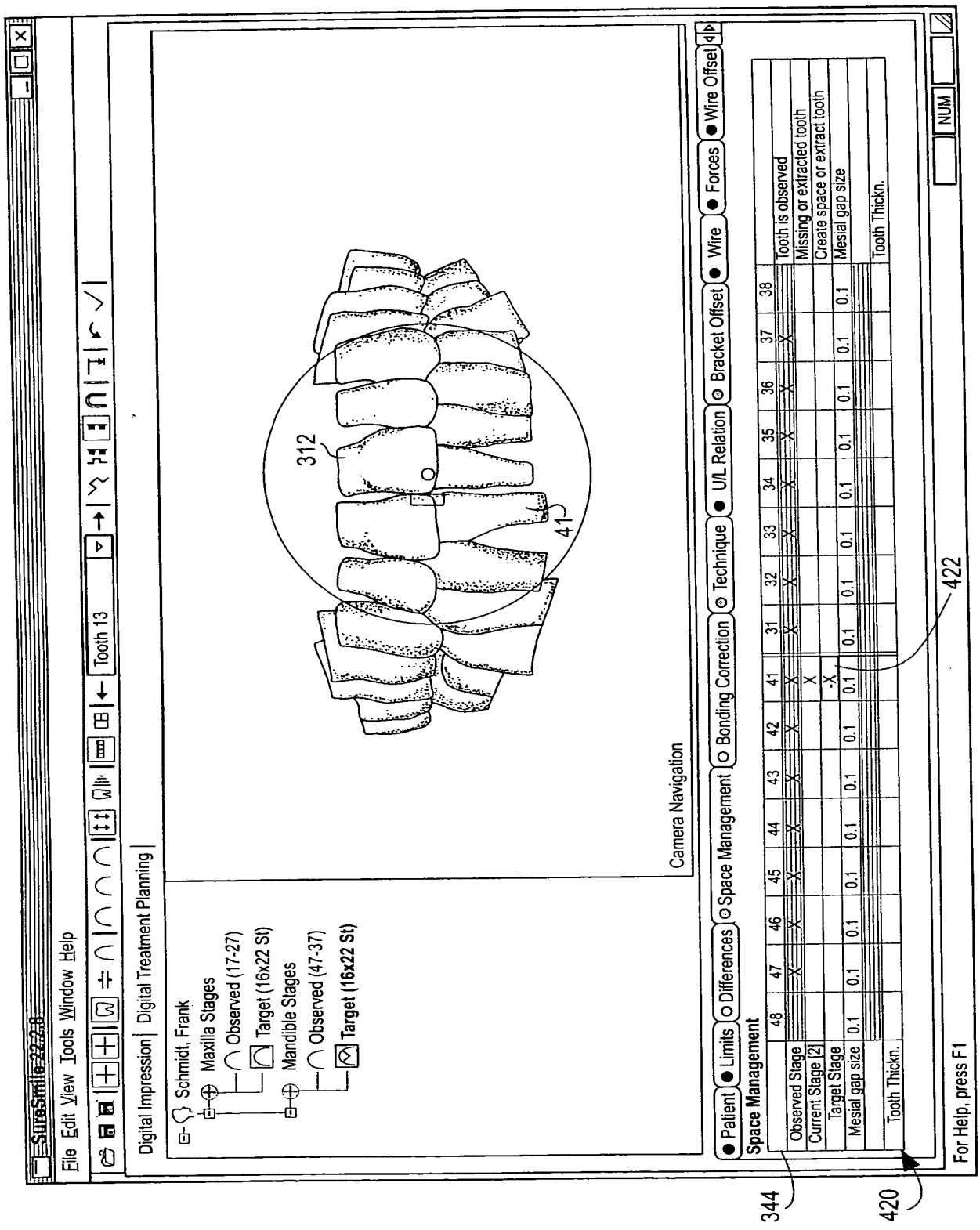

SureSmile 2.2.8
File Edit View Tools Window Help
Tooth 13
Digital Impression | Digital Treatment Planning
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target (16x22 St)
Mandible Stages
Observed (47-37)
Target (16x22 St)
312
41
Camera Navigation
Patient | Limits | Differences | Space Management | Bonding Correction | Technique | U/L Relation | Bracket Offset | Wire | Forces | Wire Offset
Space Management
48 47 46 45 44 43 42 41 31 32 33 34 35 36 37 38
Observed Stage
Current Stage [2]
Target Stage
Mesial gap size 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1
Tooth Thickn.
Tooth is observed
Missing or extracted tooth
Create space or extract tooth
Mesial gap size
Tooth Thickn.
422
344
420
For Help, press F1
NUM

FIG. 25

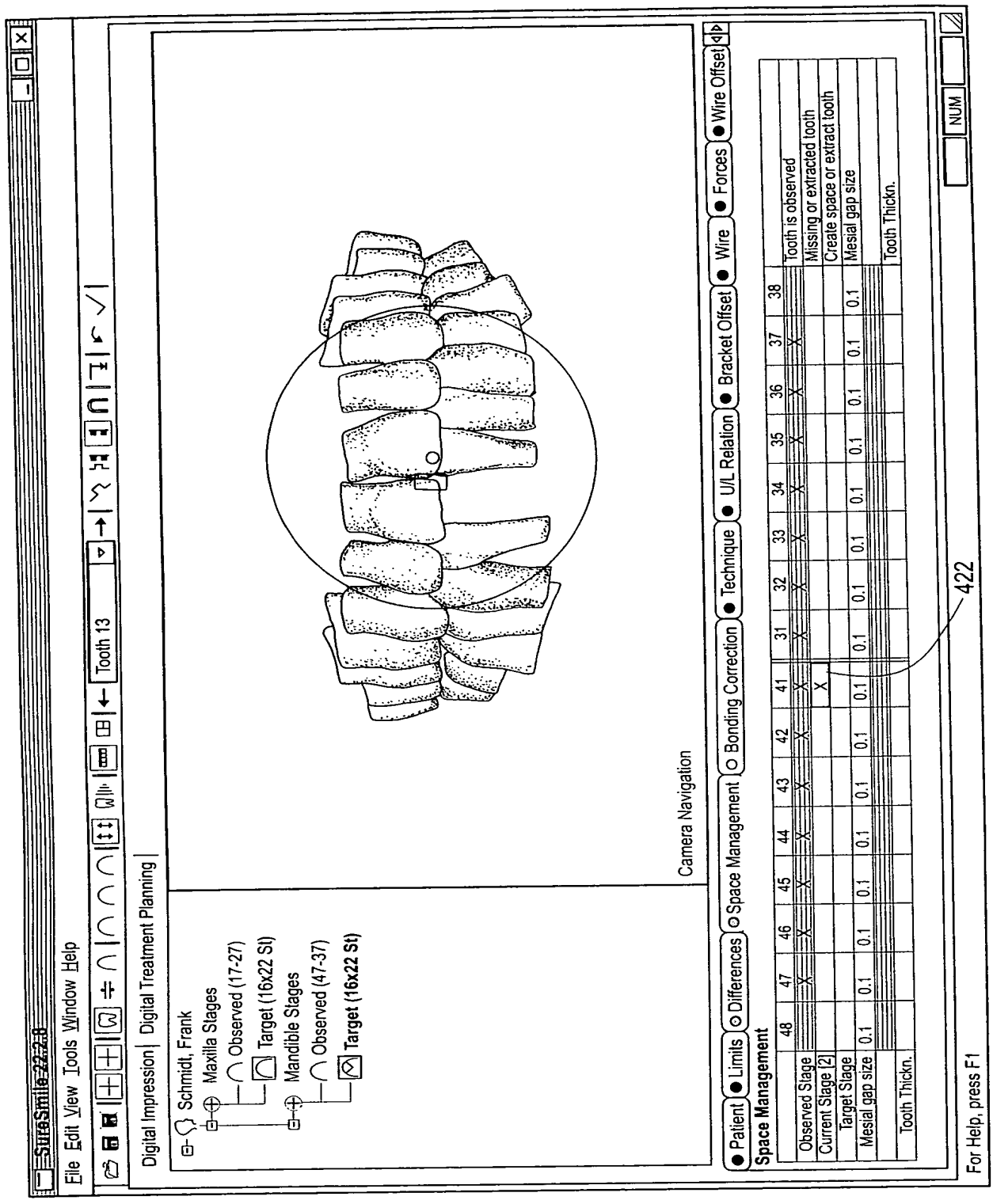

SureSmile 22.2.0
File Edit View Tools Window Help
Tooth 13
Digital Impression | Digital Treatment Planning
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target (16x22 St)
Mandible Stages
Observed (47-37)
Target (16x22 St)
Camera Navigation
Patient Limits Differences Space Management Bonding Correction Technique U/L Relation Bracket Offset Wire Forces Wire Offset
Space Management
48 47 46 45 44 43 42 41 31 32 33 34 35 36 37 38
Observed Stage
Current Stage [2]
Target Stage
Mesial gap size 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1
Tooth Thickn.
Tooth is observed
Missing or extracted tooth
Create space or extract tooth
Mesial gap size
Tooth Thickn.
422
For Help, press F1
NUM

FIG. 26

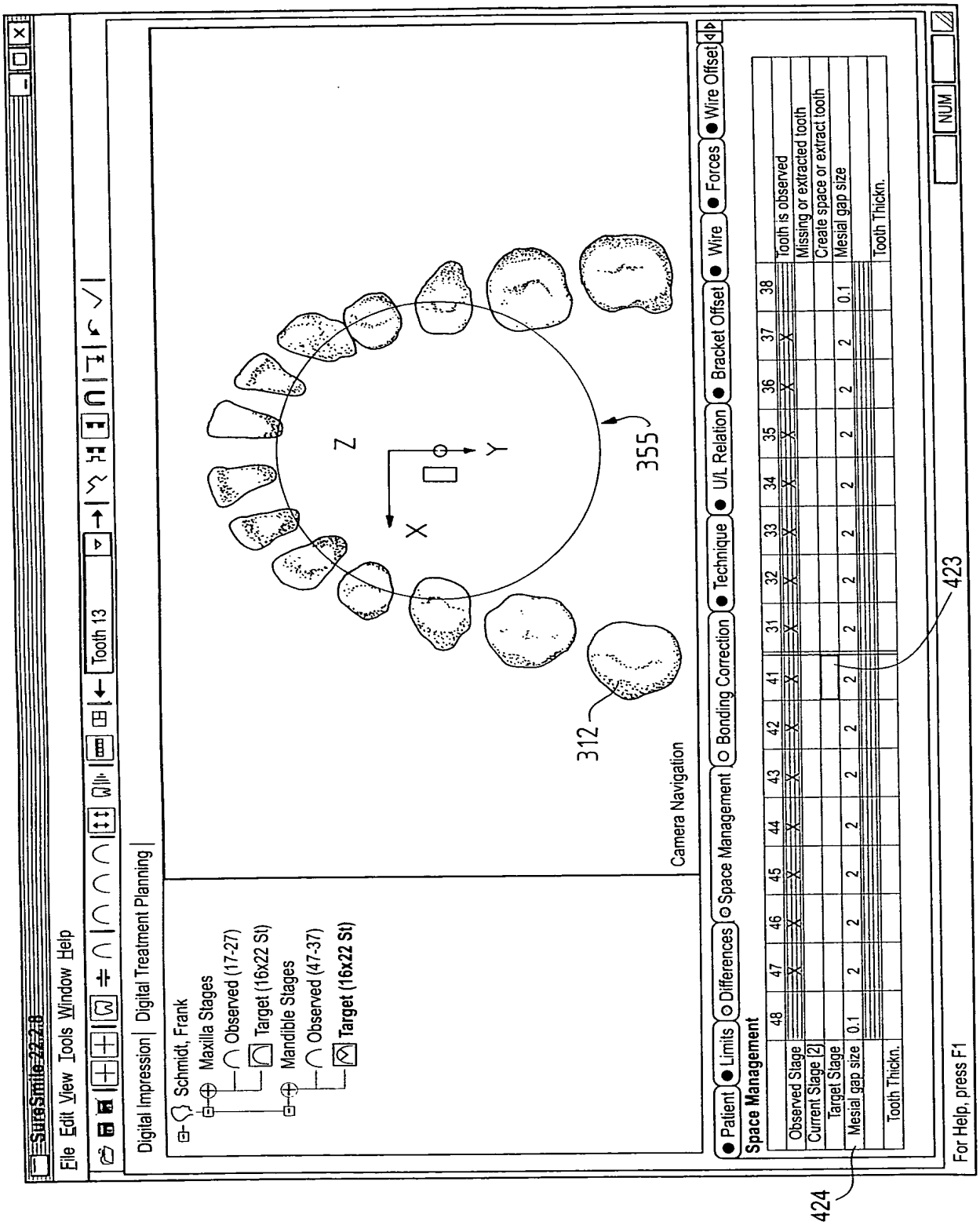

SureSmile 2.2.2.8
File Edit View Tools Window Help
Tooth 13
Digital Impression | Digital Treatment Planning
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target (16x22 St)
Mandible Stages
Observed (47-37)
Target (16x22 St)
Camera Navigation
Z
Y
X
355
312
Patient | Limits | Differences | Space Management | Bonding Correction | Technique | U/L Relation | Bracket Offset | Wire | Forces | Wire Offset
Space Management
48 47 46 45 44 43 42 41 31 32 33 34 35 36 37 38
Observed Stage
Current Stage [2]
Target Stage
Mesial gap size 0.1 2 2 2 2 2 2 2 2 2 2 2 2 2 0.1
Tooth Thickn.
Tooth is observed
Missing or extracted tooth
Create space or extract tooth
Mesial gap size
Tooth Thickn.
423
424
For Help, press F1
NUM

FIG. 27

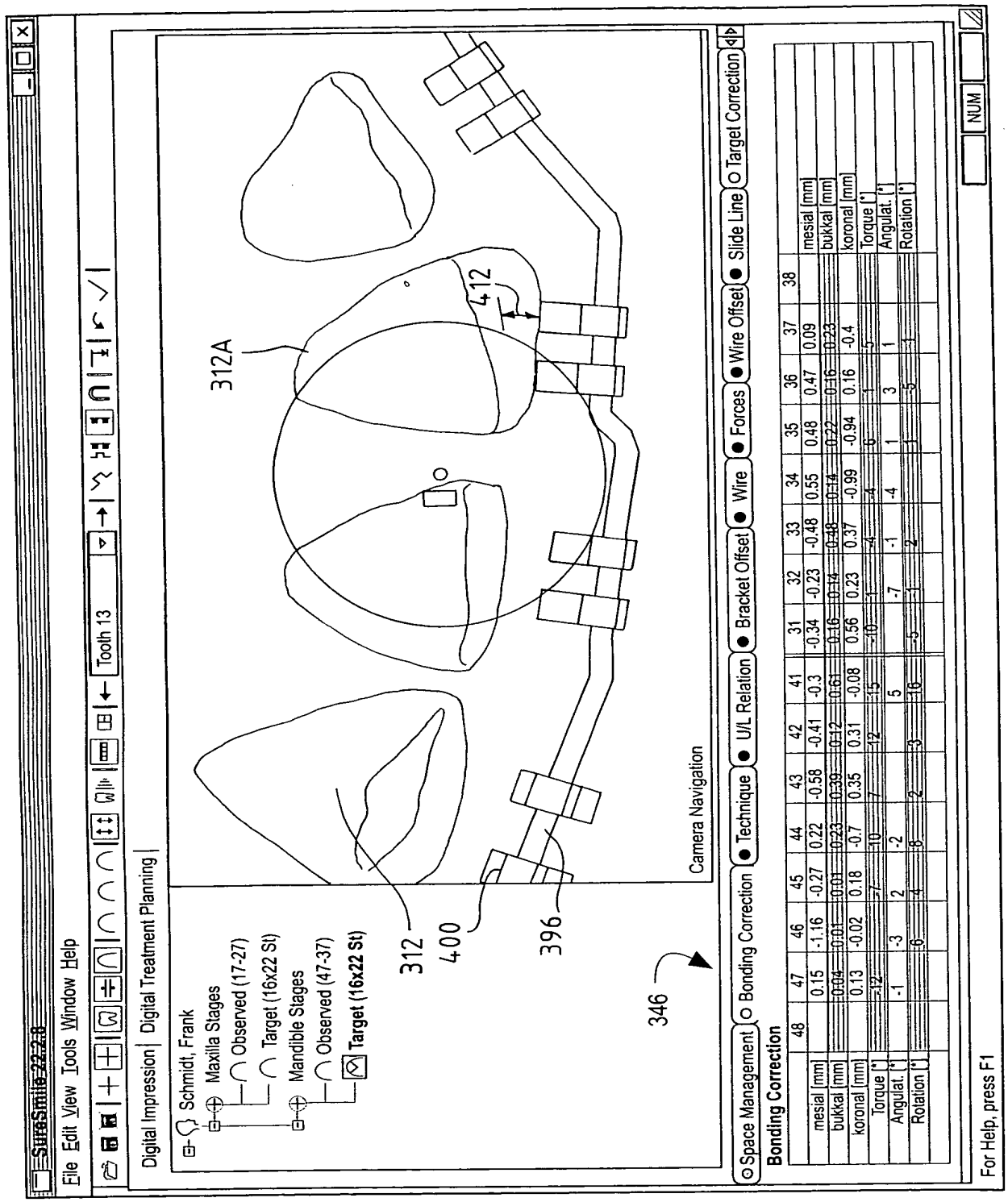

SureSmile 2.2.2.8
File Edit View Tools Window Help
Tooth 13
Digital Impression | Digital Treatment Planning |
Schmidt, Frank
Maxilla Stages
Observed (17-27)
Target (16x22 St)
Mandible Stages
Observed (47-37)
Target (16x22 St)
312A
412
312
400
396
346
Camera Navigation
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Wire
Forces
Wire Offset
Slide Line
Target Correction
Bonding Correction
mesial [mm]
bukkal [mm]
koronal [mm]
Torque [°]
Angulat. [°]
Rotation [°]
For Help, press F1
NUM

FIG. 28

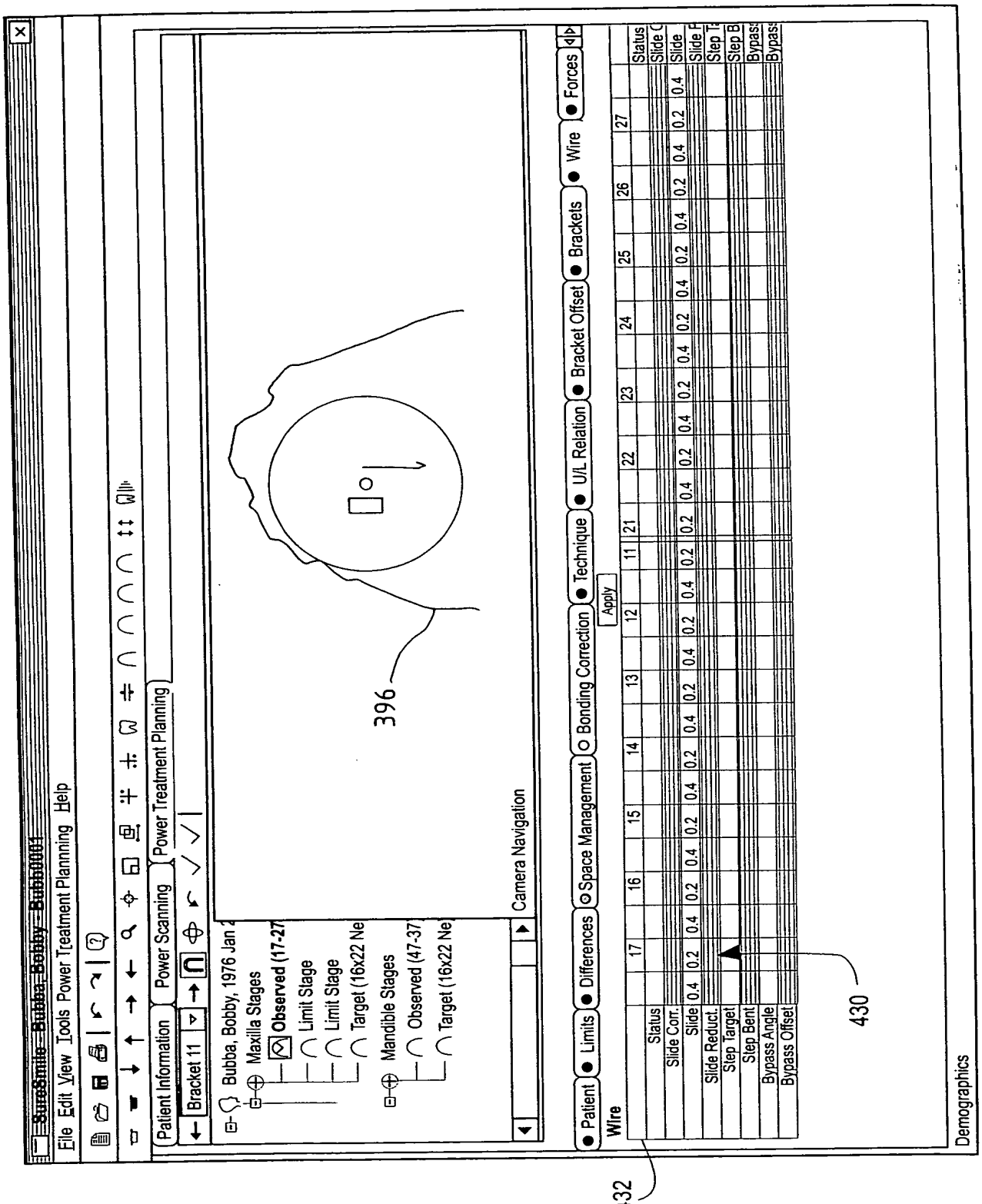

SureSmile - Bubba, Bobby - Bubb0001
File Edit View Tools Power Treatment Planning Help
Patient Information
Power Scanning
Power Treatment Planning
Bracket 11
Bubba, Bobby, 1976 Jan
Maxilla Stages
Observed (17-27
Limit Stage
Limit Stage
Target (16x22 Ne
Mandible Stages
Observed (47-37
Target (16x22 Ne
Camera Navigation
396
Patient
Limits
Differences
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Brackets
Wire
Forces
Apply
Wire
Status
Slide Corr.
Slide
Slide Reduct.
Step Target
Step Bent
Bypass Angle
Bypass Offset
Demographics
430
432

FIG. 29

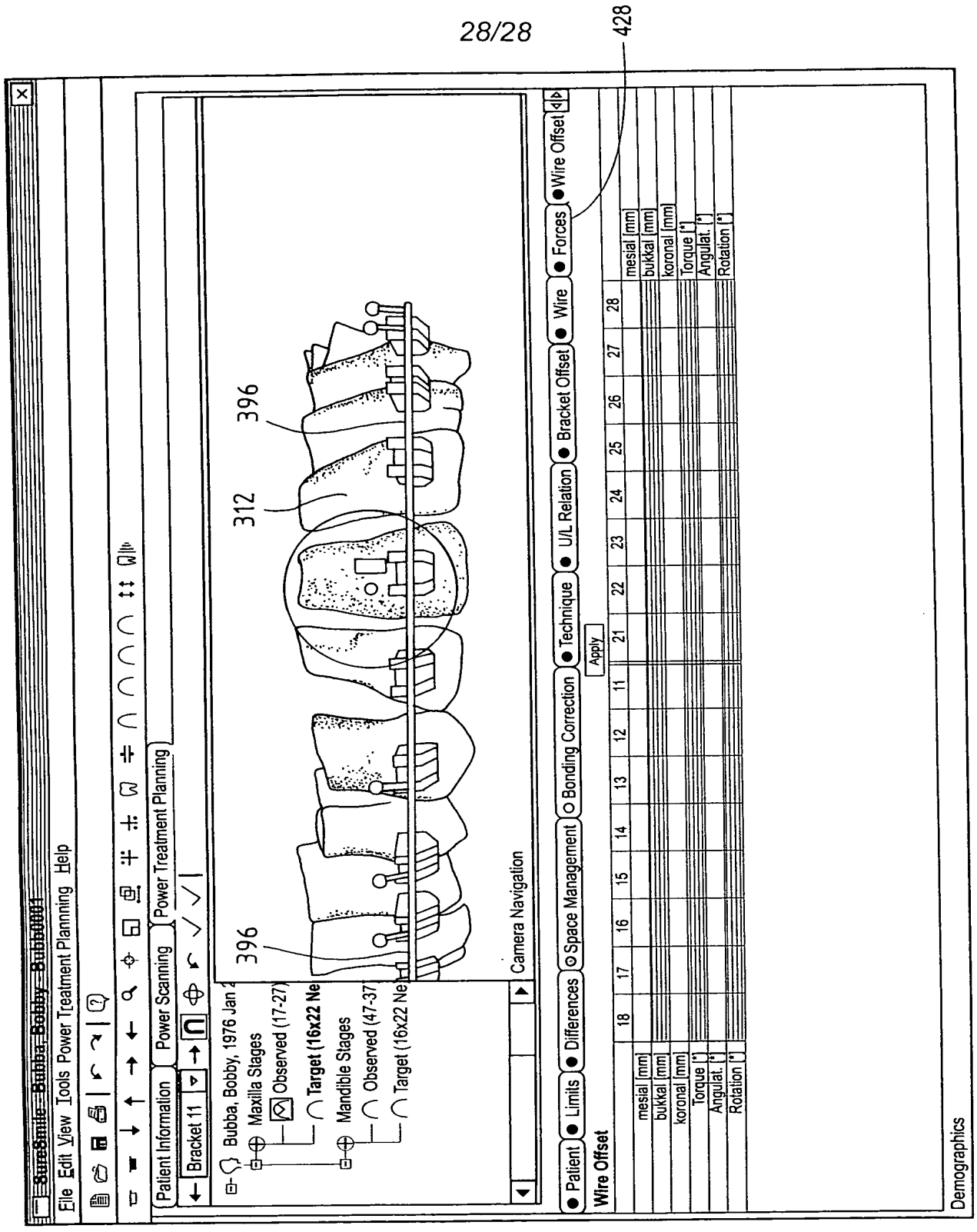

428
396
312
396
File Edit View Tools Power Treatment Plannning Help
Patient Information
Power Scanning
Power Treatment Planning
Bracket 11
Bubba, Bobby, 1976 Jan
Maxilla Stages
Observed (17-27)
Target (16x22 Ne
Mandible Stages
Observed (47-37
Target (16x22 Ne
Camera Navigation
Patient
Limits
Differences
Space Management
Bonding Correction
Technique
U/L Relation
Bracket Offset
Wire
Forces
Wire Offset
Apply
Wire Offset
mesial [mm]
bukkal [mm]
koronal [mm]
Torque [°]
Angulat. [°]
Rotation [°]
Demographics

FIG. 30